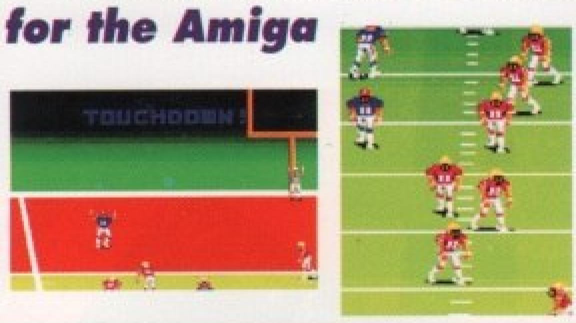
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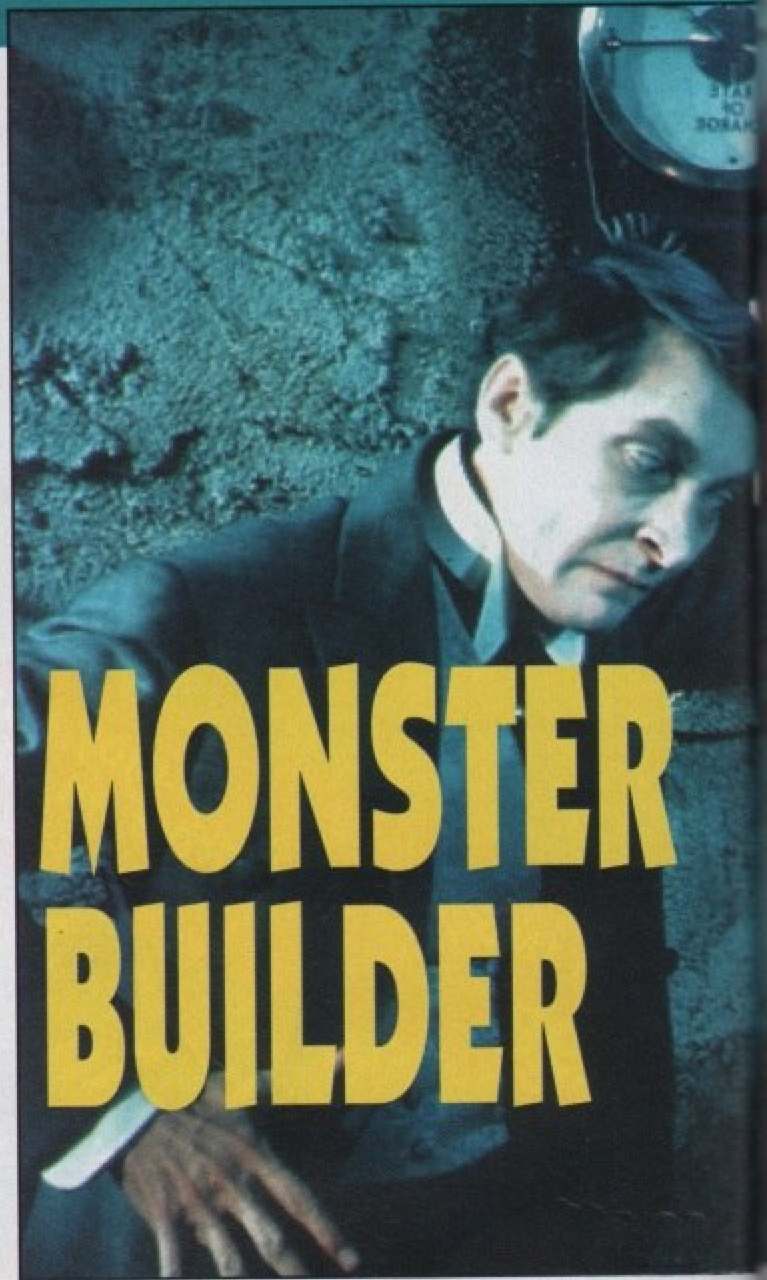
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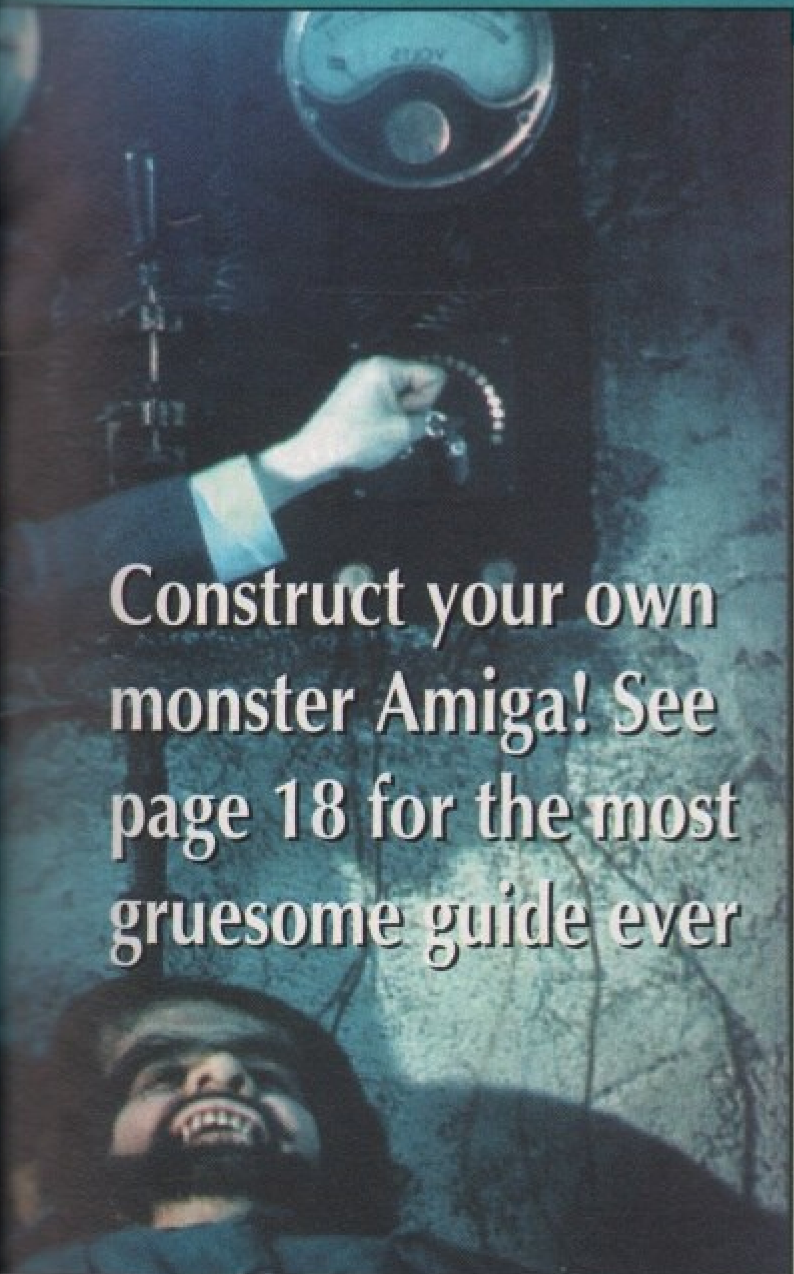
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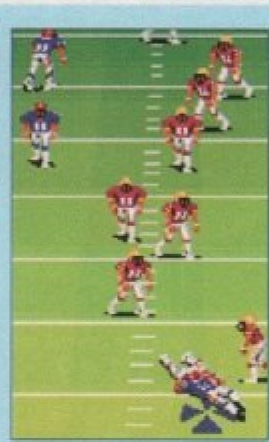


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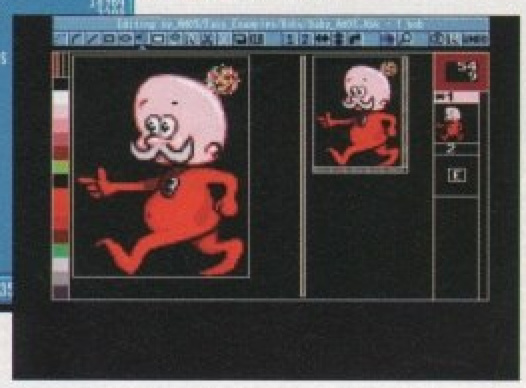
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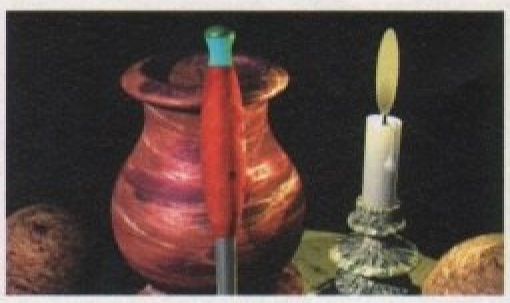
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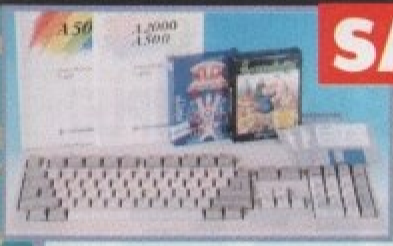
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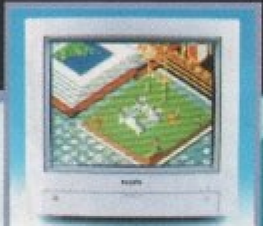


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AMIGA COMPUTING NEWSLINE

Baby Amiga launched

John Butters reports from Hanover

EXCLUSIVE

THE GIANT CeBit electronics show held in Hanover, Germany at the end of March was the launch pad for Commodore's latest Amiga, the A600.

Basic details of the machine were exclusively revealed in the January issue of *Amiga Computing*, when it was known as the A300.

The A600 is similar to the A500P. It is housed in a smaller case without the numeric keyboard and looks more like the C64 than any other Amiga.

Enhancements include a built-in TV modulator and the ability to use memory cards of between 512k and four megabytes capacity.

Memory cards offer advantages over traditional storage methods including speed and memory saving, and they are more secure against software piracy. However, they cost much more than floppy disks.

The new Amiga can be bought with or without an internal hard disk drive. Supplied with a hard drive, the machine is called the A600-HD. Storage capacity ranges from 20 to 120Mb and standard A600 models can have drives fitted as extras.

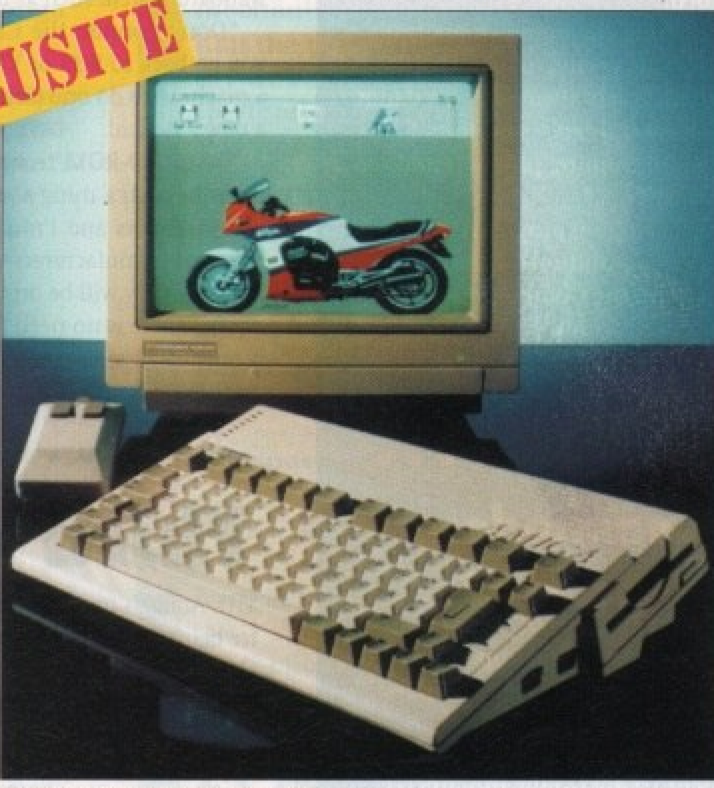
Using surface mount technology, the computer does not have the A500P's side expansion port, and the trapdoor underneath has been made non-standard. Owners will be unable to use many existing Amiga accessories.

Like the A500P, it uses the 16-bit Motorola 68000 processor and 8-bit stereo sound. It is sold with one megabyte of memory, an internal 3.5in floppy disk drive and uses Workbench 2.04.

Head of Commodore Germany, Helmut Jost, said the A600 could be described as the world's most powerful colour portable computer. He said it plugs straight into TV sets, which can be found in most homes and hotels.

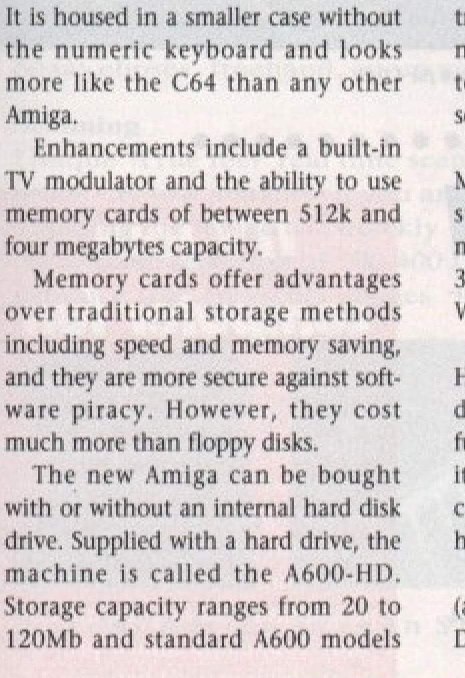
In Germany, prices are DM900 (about £315) for the basic A600 and DM1,200 (about £421) with a 20Mb hard drive. The A500P also costs DM900.

There are no confirmed details of UK availability, although trade newspaper *Computer Trade Weekly* recently predicted it could go on sale in Britain sometime between Easter and June for £399.



A600 enters at same price as A500P

Gould confirms new machines



Irving Gould: New Amigas in the way

ONLY days after the A600 was unveiled in Germany, Commodore's president Irving Gould confirmed to *Amiga Computing* that new Amigas are on the way.

Asked about the A4000 and another planned machine expected to be pitched between the A2000 and A3000 he said: "We plan to maintain our role as an innovator, with new product introductions in the future."

Gould dismissed rumours that the giant intend to switch to faster chips for entry-level Amigas. He likened running an A500 from a 68020 or 68030 processor to people owning Ferraris and driving them in a ten miles per hour speed zone.

But he said: "As prices of Motorola chips come down – and in this industry prices never go up, they always come down – you will see new products coming from Commodore making use of these processors."

Swifter service

CITIZEN'S Swift 9 printer has been given a massive vote of confidence with an order from the French postal service, La Poste, for machines to be used at 4,000 rural post offices.

The dot matrix models will be specially adapted for the role and will allow La Poste to print customer receipts, standard post office forms and accounting documents with up-to-the-minute technology.

CDTV push at CeBit

CDTV featured heavily in the Commodore corner at this year's CeBit exhibition, with a new system called Amiga CDTV being unveiled.

It includes a CDTV player, remote keyboard, floppy disk drive, mouse and Amiga OS and manual.

All the peripherals are housed in a black casing to blend in with the player and the bundle costs about DM2,300. A monitor can be bought for an additional DM550.

Poor sales since the player's launch were defended by management. They said that Commodore had been pioneers in the CD market and that many people still didn't understand the technology.

Helmut Jost said that during the initial sales period lessons were learned and he was confident the machine would succeed.

Irving Gould was sure that CDTV will not become a non-standard system such as Beta video recorders.

"Don't confuse the CD-ROM industry as a VHS/Beta. If you go back to Beta or VHS you have to remember that was a machine to do one thing, and that was to show movies on a tape," he said.

"With CD-ROM technology, in my opinion, there will never be such a thing as a standard. There is room for many manufacturers and I'm predicting that you will see several different manufacturers whose machines will not be compatible – they will be on the audio side.

"But there is no need for a standard because the machine is only as good as the software. People will buy a particular machine or a particular brand of machine because of the software that is available that will do a job for them."

He concluded: "A CDTV, or computer for that matter, is only a doorstop – all you can do is use it to keep the door open, without a good program. Our product only sells because of the software, whether we like it or not."

For owners of A500/Ps wanting to use CDTV software, the new CD-ROM drive was on display. Now called the A570, the company predict that 50,000 drives will be sold in Germany before the end of the year.

Sales will be restricted by a production limit and international demand. There has still not been an announcement on a UK release date.



Complete Amiga pack for CDTV

Police Amiga wins award

AN AMIGA-based system used to train police procedures for controlling crowds at football grounds is on the wanted list for police forces across Europe after it picked up a top technology award.

Vistrain grabbed the 1991 European Training Technology Event Application Award for the most innovative and cost-effective application of training technology.

Working with the National Computing Centre, the Scottish Police College developed Vistrain following the Hillsborough disaster where 95 fans died.

"Providing classroom simulations of large scale events such as crowd disturbances has always been a daunting task for trainers," said John Eary, manager of training products and services at NCC.

"By developing programs using the AmigaVision multimedia authoring language on the Commodore Amiga, we produced an innovative solution at a fraction of the price of any other PC platform."

Commodore go East

SUCCESS in Eastern Europe has led to Commodore deciding to open new offices in several countries.

Speaking in Germany, company president Irving Gould announced: "Recently we opened our first representative office in Warsaw, Poland.

"This is the beginning of a series of intensive activities in Eastern Europe. Other offices will be opened in the Commonwealth of Independent States, Hungary and Czechoslovakia."

He added that the firm's C64 and the professional computer application sector is experiencing significant demand in that part of the world.

Video for Plus

FOLLOWING the success of their video training programme for the A500, New Image Videos have now released a version for the A500P.

A three-hour tutorial, it is supplied with an Amiga jargon dictionary and anti-virus disk for £24.99. For more information write to New Image Videos, 10 Grange Avenue, Scarborough YO12 4AA.

Third centre formed

THE Amiga's multimedia role has been strengthened with a third specialist centre being formed at a computer graphics and audio-visual equipment supplier.

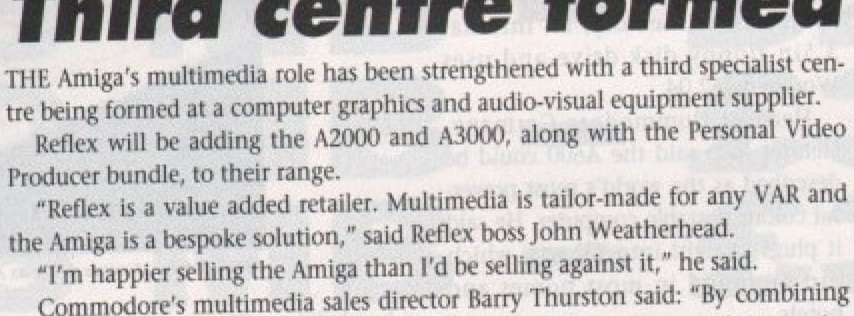
Reflex will be adding the A2000 and A3000, along with the Personal Video Producer bundle, to their range.

"Reflex is a value added retailer. Multimedia is tailor-made for any VAR and the Amiga is a bespoke solution," said Reflex boss John Weatherhead.

"I'm happier selling the Amiga than I'd be selling against it," he said.

Commodore's multimedia sales director Barry Thurston said: "By combining the Amiga with Reflex's extensive range of computer graphics and AV equipment, sophisticated presentations on any scale or budget are made simple."

Reflex are based in Reading, Berkshire and can be telephoned on 0734 313611.



Left to right: Reflex's MD John Weatherhead, Commodore's Barry Thurston and Brian Lavington, Commodore's multimedia sales manager

ITV join computer fun

A SECOND television programme devoted to young computer and video games players is scheduled for ITV channels on the run up to Christmas.

Produced by Yorkshire Television, the as yet unnamed programme will be presented by Andy Crane and aimed primarily at children aged between 12- and 16-years-old.

The 25-minute programme has been given a broadcast slot of 5.15pm on Thursdays and will cover all formats.

The existing Channel 4 games television show, Gamesmaster, which started at the beginning of January, is now achieving an audience of more than three million.

Storing more

HIGH density floppy disk drives are soon to become available for the A3000, Commodore's multimedia division have confirmed. Up to 1.44Mb of information can be stored on suitable disks.

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The PC880B, the only drive to introduce Blitz Amiga, the Power anti-click device and to combat viruses, is only available direct from Power, priced at just **£69·95**

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*Due to the precision nature of the Blitz copier high density disks may be required with some internal drives.

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Our latest dual drive uses the slimline, ultra low power NEC drive mechanism. This drive takes less than half the power of a normal floppy drive. The new dual drive includes all the features you would expect from a Power Computing Drive.

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Raid raises demo trouble

DEMO disks were confiscated during a raid on a public domain library by trading standards officers recently, and Amiga libraries could soon be forced to remove similar programs from their catalogues.

It is alleged that many of the 39 Atari ST disks taken from South West Software Library breach copyright. Most feature movies or music from top groups.

Two policemen and a Federation Against Software Theft (FAST) investigator supervised three men from Dorset Trading Standards Department during the swoop on SWSL's Poole office.

Shocked library proprietor Martyn Dryden claimed: "Rumours coming back to me suggest that this was a FAST raid – this is totally erroneous. They were simply there in an advisory role.

"If it ends up that we can't distribute demos we could be forced to close."

Said FAST investigator John Lowder: "The BPI [British Phonographic Industry] watchdog for music copyright have been in touch with FAST.

"There has already been a meeting to discuss music demos and any copyright implications," he said. Lowder could not comment on the SWSL case.

The BPI are now looking at the whole demo situation. Anti-piracy co-ordinator Tim Dabin told *Amiga Computing*: "We can't make any distinction between this and any other piracy medium.

"The fact that it's on floppy disk is irrelevant – reproducing copyrighted material without permission is an offence. We are now comparing PD disks with the original work in order to establish whether it's the same recording.

"Under the Act either civil or criminal proceedings could be taken, although the best way to handle it would be to educate people that they are committing an offence."

Dorset Trading Standards Department were unavailable for comment.

A world at your fingertips

CENTAUR Software's (010 1 310 542 2226) World Atlas program for students and travellers has been updated to reflect recent world changes.

Latest global statistical and political information, such as the unification of Germany and the dissolution of the Warsaw Pact, has been included.

Other additions to be found in v2.5 include easy hard drive installation and the ability to print maps and other information. The price is $59.95. Registered owners can upgrade for $10.

Some grey words

GREY-imported copies of Digita International's Wordworth wordprocessor are the latest Amiga packages to be sold in Britain by non-approved resellers at "very, very low prices".

The company have reacted to the move by refusing to give technical support or offer upgrades to future versions to owners of the outdated software.

Said Digita boss Jeremy Rihll: "As the author and sole worldwide publisher of Wordworth, Digita recommend that customers check with their supplier that they are buying the genuine UK version.

"To fully support the trade, all future packaging is to be clearly marked, for example "Export only, not for resale in the UK".

For information on where to find your nearest Digita dealer telephone 0395 270273.

Splitting transfer

PEOPLE who transfer large files, such as pictures, from Amigas to other types of computer will benefit from a tool just added to ASDG's (010 1 608 273 6585) Art Department Professional.

Version 2.1.0 of package has a new SPLT feature to enable files which can not be copied onto a single floppy disk to be split into manageable chunks and then put back together in their proper order.

Programs to run under AmigaDOS, MS-DOS and Microsoft Windows are supplied with ADPro. The utility will be sent free to registered users of ADPro 2 and owners of earlier versions can upgrade for a small charge.

In the UK contact Silica Systems on 081-309 1111.

QuickWrite writing better

WORDPROCESSOR QuickWrite has been polished up to make it easier to use, American software house New Horizons have just announced.

Documents can be saved automatically at timed intervals to reduce the amount of work lost through mishaps, and new commands enable users to set up the default working environment and save it for future use.

It also now follows Workbench 2's 3D look, which New Horizon's say gives a much more professional feel to QuickWrite's writing environment. Macro and ARexx enhancements increase control over internal functions.

Version 1.1 is available in Britain for £49.95 from Silica Systems (081-309 1111). Upgrade details remain to be confirmed.

More CDTV at Dixons

HIGH Street giant Dixons have given CDTV a boost with a decision to sell the player at more stores.

Commodore say that Dixons is increasing the number of outlets stocking the machine from 36 to 100 because of heightened consumer demand.

The manufacturer claim that the Christmas advertising campaign for CDTV "increased dramatically" awareness and demand for the product.

Meanwhile, an unconfirmed report suggests that CDTVs are now being sold running from Workbench 2.04. Commodore spokesman Andrew Ball denied the rumour.



Dixons take more CDTVs

Workbench improves again

THE WORKBENCH operating system has been improved further, as v2.04 upgrades finally become available for owners of older Amigas.

Some developers already have WB2.1, a software upgrade with new features and improvements. They include the ability to read, write and format PC disks.

Requiring the Enhanced Chip Set, it also has sound improvements and better system configuration. But it could be next year before WB2.1 is included with new machines.

"There will be no change this year on retail products," claimed Commodore's Andrew Ball.

"The Amiga operating system, as we all know, is an evolving creature which we are always improving for our users. It's impossible to say how long it will take to bug check and clean up."

Commodore have just started selling upgrade kits to v2.04 through Silica Systems (081-309 1111).

Included in the packs are the Kickstart 2 ROM, manuals and Workbench 2, fonts and extras disks. Price: £79.95. Super Fat Agnus and Super Denise chips can be bought as extras.

Better backgrounds

FONTS, borders and backgrounds for use with Deluxe Paint are the speciality of a new firm called MS Images.

All disks cost between £2.50 and £4.50. For more information write with an sae to MS Images, 84 Averil Road, Leicester LE5 2DB.

Star replacement

HOME computer users are among those being targeted for Star Micronics' latest 24-pin black-and-white dot matrix printer, the LC24-20.

A replacement for the LC24-10, the new model has ten letter-quality fonts including italics, and prints at up to 210 characters per second in high speed draft and 64cps in letter-quality mode.

An LCD panel is intended to make the setup easier, and Auto Emulation Change can automatically sense and select either of the resident industry-standard emulations from the computer control codes sent. The LC24-10 also has a 16k buffer which is expandable up to 48k and the capability for original plus two copies printing.

Said Star's sales director Roger Bayley: " I expect that the LC24-20 will gain rapid popularity, when our customers start talking about the new features normally found only on the expensive models available today."

Recommended price is £304.33.



Aimed at home users is Star's latest, the LC24-10



Amiga takes control with Switchsoft's new I/O port

Total control

SWITCHSOFT (0325 482454) have announced the availability of an Input/Output Port for controlling robots, electrical motors, sensors and mains appliances through an Amiga.

It plugs into the computer's printer and joystick ports and gives eight outputs and up to 13 digital inputs. The port can be programmed using most Amiga languages including Basic.

Aquarian grab DKB

AQUARIAN Public Domain (0703 685006) have been appointed the official UK distributors for DKB's range of products.

Among them is a 2632 board which plugs into the unused expansion slot on Commodore's A2630 68030 accelerator to enable up to 112 megabytes of 32-bit memory to be added.

Supplied with four megabytes of memory, it costs £650.

Citizen take driving seat

A PRINTER driver disk is to be released for the Amiga by Citizen Printers within the next few weeks.

Called Citizen Print Manager, the new driver is intended to improve printing results and give greater capabilities to users of Amigas and any of the firm's printers.

Benefits are said to include improved print quality and removal of banding, image smoothing, easier use, image scaling by width and height, and colour and gamma correction to ensure screen images are exactly reproduced.

Based on the Irseesoft Turbo Print Professional software package it will cost £14.10, although it will be offered free between April and June.

"Citizen Print Manager offers end users a real breakthrough when printing with Amiga and Citizen machines, especially when using the colour option," commented Citizen's Julie Haswell.

To obtain the free disk call the freephone number 0800 444276.

Scrolling scripts

SMOOTH Talker is a new teleprompting program for producing a full-screen prompting display which can be scrolled vertically using remote control at various speeds.

Displayed on black or white backgrounds, text can be in any normal Amiga font at up to 50 point. Individual lines of text can be highlighted at cue markers inserted.

Users can import text from wordprocessors in Ascii format, or text written using the software's built-in editing features. Scripts may be exported in Ascii, saved in an internal format with font and mark-up information, or printed.

Supplied with the remote control, Smooth Talker is available for £141 from ZEN Computer Services (061-793 1931).



Smooth Talker uses any Amiga for scrolling scripts

Show for Frankfurt

THE Amiga show calendar has been given a new event in Frankfurt, Germany. World of Commodore '92 will support all Commodore machines and the manufacturer will exhibit. Organiser Fairs and Fun (010 49 8106 34238) are expecting 200 firms and more than 100,000 enthusiasts to attend.

Dialling for Dyspell?

AMIGA users wanting to get hold of Sally Systems' dyslexia software, Dyspell, (see Newsline March 1992) should telephone Max Lipman on 0628 24626. Supplied on 15 disks, the package costs £411.25.

Support for Olympic bid

COMMODORE have joined forces with car manufacturer Mercedes Benz and German airline Lufthansa to promote the city of Berlin's bid to host the Olympic Games in the year 2000. The venue for the games will be chosen in September next year.

Simulator stays

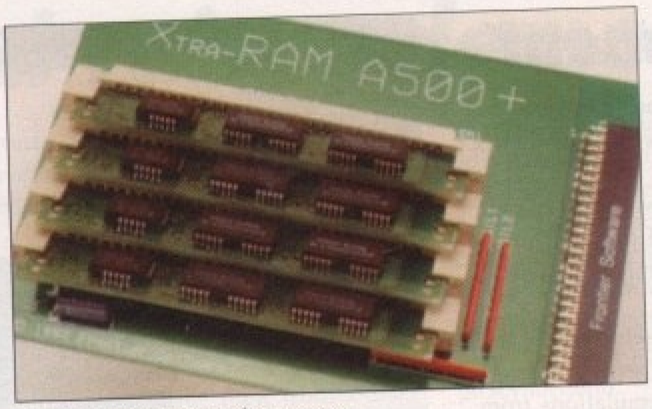
ELECTRONICS giant Philips are to continue bundling flight simulation software with their stereo colour monitor.

Microprose's F-19 Stealth Fighter package will be included with the Philips CM8833/II until summer.

And the manufacturer have warned buyers that grey imported models do not have the free software and are sold with a European power lead.

Boxes should be marked with BEAB BS415 safety standard approval stickers, they say. Recommend price: £229.99.

More memory for Plus



Frontier release more Amiga memory

FRONTIER Software (0423 567140) are the latest company to release memory expansion for the A500P.

XTRA-RAM A500+ fits into the trapdoor underneath the computer to give the machine up to two megabytes of memory.

Unpopulated, the board costs £15.99. With half a megabyte the price is £34.99 and for £49.99 a one megabyte version can be bought.

Sales grow worldwide

MORE than three million Amigas have now been sold worldwide and the sales trend is still pointing up, Commodore claim.

The firm say there was a 21 per cent increase in sales during the last three months of last year and predict that the four millionth Amiga will be sold by the end of the year.

Dial for playing power

A SERIES of 15 telephone numbers have been set up for games players with healthy bank balances, aimed at giving news, tips and reviews.

Called Games Power, lines are available for most popular home computers and consoles including the Amiga. An index of services can be dialled on 0891 312315.

Calls are charged at normal premium rates of 36 pence a minute during cheap rates and 48 pence at all other times.

Night flying for A320

A320 Airbus pilots are to be able to buy the first accessory disk for the flight simulation package within the next few weeks.

Thalion have announced that it will give the ability for proper night time flying and enable users to practice techniques such as airport approach and landings. The disk will cost £14.95.

UK grows for CompuServe

COMPUSERVE, the giant communications service, now has more than 11,000 members in Britain, making the company the UK's leading supplier of online information.

It has more than 1,500 databases which include news, electronic mail, educational and reference information, computer support, shopping and entertainment information.

"We have enjoyed tremendous growth since entering the UK market," enthused CompuServe's Andrew Gray.

"We took measures to ensure the service was available at reasonable rates to users across the UK, and to develop, resources to provide CompuServe's excellent standards of customer service."

CompuServe can be called on 0272 255111.

Another plant for Germany

ANOTHER Commodore production and logistics centre is to be built in Braunsweig, Germany. Company president Irving Gould said the plant should be opened by the end of this year.

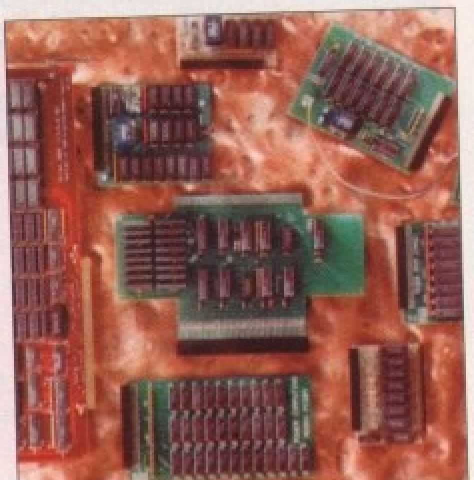
Memory power

SEVERAL new Amiga memory expansion boards have been added to Power Computing's growing range of products.

Upgrades are available with between 512k and eight megabytes of extra memory in a variety of formats.

Amiga users can buy a 16-chip 512k upgrade with battery-backed clock for £24, while for memory-hungry users an eight megabyte expansion with fast RAM and a thru-port to connect to hard drives costs £299.

For full details call Power Computing on 0234 843388.


Power Computing release memory expansions for all needs

Drive with Canon

OWNERS of Canon laser and bubblejet printers including the popular BJ-10e can now get hold of the latest Amiga drivers free from Canon.

Modem users can download them from a special bulletin board by dialling 081-669 4586 or by sending a blank disk to Canon at Canon House, Manor Road, Wallington SM6 0AJ.

Do you know something we don't?

Although *Amiga Computing* has scores of contacts in the Amiga world, we need you. If you have some hot news ring John Butters on the news desk now on 0625 878888 or fax to 0625 879966. All information supplied will be treated in the strictest of confidence.

DIARY DATES

12 to 14 April 1992
European Computer Trade Show
Organiser: Blenheim Online
(081-742 2828)
Venue: Business Design Centre, London
A trade-only show where many of the year's releases can be previewed.

28 to 31 May 1992
Spring Computer Shopper Show
Organiser: Blenheim PEL
(081-742 2828)
Venue: Olympia, London
An area called Amiga Shopping Centre will be devoted to the machine.

10 to 12 July 1992
6th International 16-bit Computer Show
(081-549 3444)
Venue: Wembley Exhibition Halls, London
The second show of the year, for an event that's getting more and more support from the industry.

6 to 8 September 1992
European Computer Trade Show Autumn
Business Design Centre
Royal Agricultural Hall, London
A new trade-only event for the computer leisure industry.

OVERSEAS

28 to 31 May 1992
Consumer Electronics Show
Organiser: EIG/CEG
Venue: Chicago
The show opens for the first time for the public on May 30, 1992.

8 to 11 October 1992
Amiga Koln
Organiser: AMI Shows Europe
(010 49 8092 24086)
Venue: Koln Messe
A chance to catch up on the year's developments in the active Amiga world.

26 to 29 November 1992
World of Commodore '92
Organiser: Fairs & Fun
(010 49 8106 34094)
Venue: Frankfurt Exhibition Halls
The main Commodore show in Germany – 100,000 visitors expected.

● If your company is organising a show relevant to the Amiga and it's not listed, let us know so we can include the information in the diary.

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What's New USA



by Denny Atkin

The Spring AmiExpo was held on February 14 to 16, on board the Queen Mary, which is now permanently berthed in Long Beach, California.

The show exhibition hall was actually the stripped-out engine room of the grand old ship, which is now owned by Disney and serves as a hotel and tourist attraction. It was a great setting for an Amiga show, allowing Amigans to take a break from the action by walking over to see Howard Hughes' giant Spruce Goose, the largest aeroplane ever built, instead of just sitting in a hotel basement as is usual at such events.

Unfortunately, Southern California's first real rainstorm in years put a damper on the show. While some regions did experience flooding due to poor drainage, the weather wasn't actually that severe.

Still, it seems many California Amigans either feared the wet roads or were afraid they would melt in the rain, so the show actually had its biggest attendance on the last day, when the sky cleared.

This was a sort of "upgrade" AmiExpo. While there were very few new products in evidence, it seemed almost every booth was selling a new version of an older program.

Innovations at Inovatronics

Inovatronics wowed the crowd with their HiQ A500 Tower, which they will be distributing in the US for CheckMate. With three Zorro II slots, a video slot, and an A2000-style accelerator slot, this tower looks like it will be very popular at US$699.95, especially considering that you can buy the HiQ and a new A500 for less than a new Amiga 2000 sells for over here.

The company also showed upgrades to their popular Directory Opus and CanDo products. Opus 3.41 fixes a number of bugs, adds support for AmigaDOS 2.0 functions such as AppIcons, custom fonts, and ECS screen resolutions.

It also lets you view IFF images crunched with PowerPacker. CanDo 1.6 features gameport support, so you can use it for creating games (although not fast action games); proportional sliders in CanDo-created windows; a better online help facility; and support for reading and writing binary files.

Inovatronics products are available from CheckMate Digital in London.

Rafting the PageStream

SoftLogik were showing off their new HotLinks Edition add-on package for PageStream. HotLinks allows programs to share data files – if you update the data file using one program, the changes will occur in the other as well.

HotLinks Edition includes the HotLinks system software that allows interprocess file sharing; PageLiner, a text editor designed specifically for use with PageStream; and BME, a bitmap editor that will load standard and 24-bit IFFs and allow you to crop and touch up a grey-scale representation of the picture, while maintaining all the 24-bit colour data.

SoftLogik announced that they've made the HotLinks specification available to other developers, so they'll be able to add HotLinks support to their applications. SoftLogik reps said that they'd be turning their attention to finishing up Art Expression, their professional-quality structured-drawing program, as soon as they ship HotLinks Edition.

Of interest to both PageStream and ProPage users was Computer Safari's booth, showing some absolutely fantastic PageStream and PostScript Type 1 fonts. If you're looking for out-of-the-ordinary typefaces, Computer Safari is the company to contact.

Their Disk #26 contains four different Star Trek fonts, covering the original series titles, the movie titles, and the Next Generation typefaces. Disk #22 has hieroglyphics and a Klingon font, while Disk #24 has more conventional (but still fancy) typefaces like Wedding Text and SurfSide. Computer Safari can be reached at 353 W. Main St., Suite K, Woodland, CA 95695 USA; phone/fax number (916) 666-1813.

Gold Disk magic

Gold Disk showed Professional Page 3.0 to an enthusiastic crowd, but the product wasn't finished in time to ship at the show (it did finally ship in the US on March 9). The product has a magical new addition that makes it considerably more powerful – Genies.

Actually a set of sophisticated ARexx macros, the Genies can automate the creation of sophisticated page designs. The 30 sample Genies add functions such as automatic envelope addressing, mail merge, and grid creation. If you're ARexx-literate, you can use over 300 ARexx commands to create your own Genies for custom page layouts or linking to other ARexx-savvy program.

ProPage 3.0 adds Undo, a much-needed feature; five new Compugraphic outline fonts; a hot-link to the upcoming Professional Draw 3.0; support for converting PostScript Type 1 fonts into Compugraphic outline format; and new import filters for ProWrite, excellence! and QuickWrite.

Demonstrated along with ProPage 3.0 was Metadigm's MetaScan. This software for the Epson ES-300C 24-bit flatbed scanner will scan directly into Professional Page, ImageMaster and other ARexx-capable programs too.

It will also display directly onto various 24-bit graphic adaptors as it scans. This software was very speedy, and looks to set a new standard for Amiga scanning software. Metadigm can be reached at (714) 253-2828.

CSA's speed demons

CSA, the original manufacturer of Amiga accelerators, were showing a number of new products. The Rocket Launcher is a $699 board that doubles the speed of Commodore's 25MHz A2630 accelerator board by adding a 50MHz 68030 and 68882 to the combination.

The 38 Special is an upgraded version of CSA's popular Mega-Midget Racer. This 38MHz 68030 board for the Amiga 500, 1500, and 2000 computers includes 4 or 8Mb of 32-bit dynamic RAM and support for 512k to 2Mb of ultra-fast static RAM. It allows you to switch back to the 68000 for compatibility purposes. The board starts at $1,250, so it's only for the dedicated speed nut.

If you absolutely must have the fastest Amiga on the block – or in your city, for that matter – you'll love the CSA 40/4 Magnum board, unveiled publicly at the show. This pricey ($3,995) board for the Amiga 1500 and 2000 contains a 25MHz 68040, 1Mb of ultra-fast static RAM, and 4Mb of 32-bit dynamic RAM. The 40/4 can be upgraded to 64Mb of dynamic RAM.

It also includes a parallel port, two serial ports (one is RS422, so it'll support the AppleTalk network with extra software), an expansion bus for RAM over 64Mb, and an ultra-fast SCSI controller. Contact CSA, 7564 Trade St., San Diego, CA 92121 USA; phone (619) 566-3911; fax (619) 566-0581; or, for the 68030-based products only, Omega Products, England on 0925 763946.

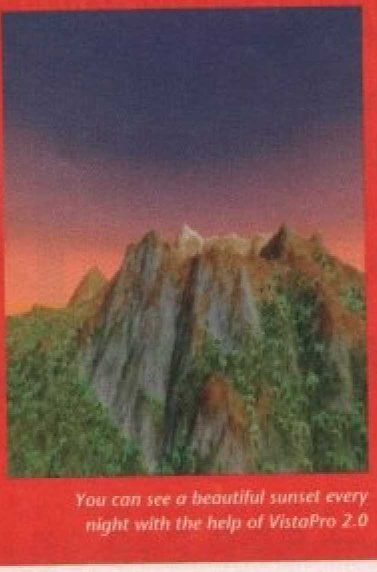
New Virtual Realities

Virtual Reality Laboratories Inc were debuting their new update of VistaPro at the show. VistaPro 2.0 will now directly render to the DCTV, HAM-E, and Firecracker 24 graphics cards. You're no longer limited to rendering random landscapes and VRLI's DEM geography files – you can load an IFF picture and convert it into a landscape.

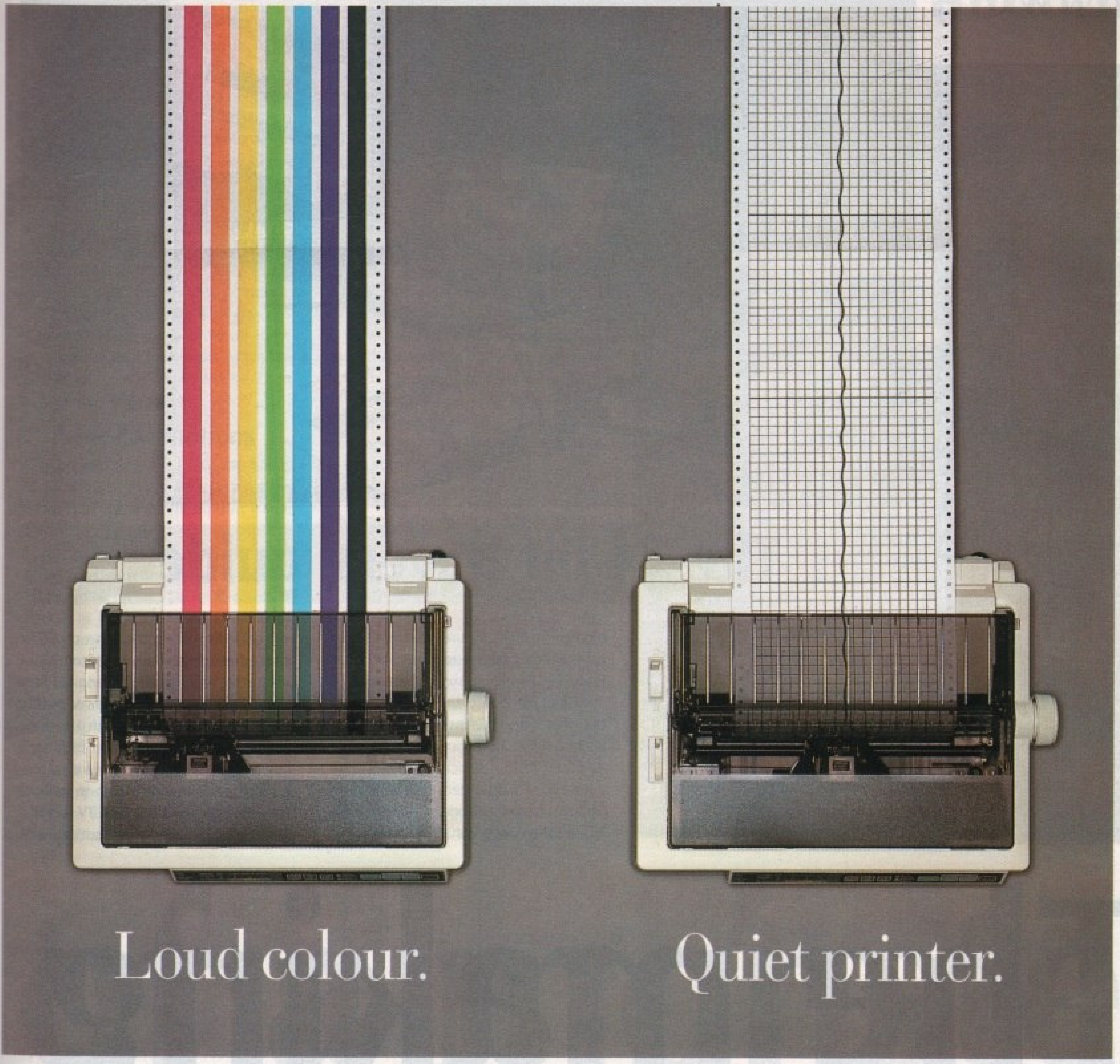
Landscapes can now be cropped, and a new bounding box feature lets you render only visible portions of the landscape, which can reduce your rendering time considerably. Unless you have an accelerated Amiga, though, you should probably still plan to do your renderings overnight.

Other new features, such as a wireframe preview mode, let you get your picture set up just right before committing yourself to a long rendering session. Your final picture can be enhanced with four different kinds of detailed trees and new shadow effects. Best of all, this much-enhanced program now has a new, lower retail price of only US$99.95, a reduction of a third.

Why would you want a terrain rendering program? Ask Arthur C Clarke – he's using VistaPro on his Amiga to create renderings for his new book on terraforming the Red Planet, entitled *The Snows of Mt. Olympus: A Garden on Mars.*



You can see a beautiful sunset every night with the help of VistaPro 2.0



When you buy one of our new QuietPrinters, your life (or, at least, your printed matter) will immediately seem brighter. That's because you have seven vibrant colours at your disposal to give documents more life by helping to lift text, graphics and pictures off the page.

Furthermore, you'll be pleasantly surprised by the quiet efficiency with which it goes about its business.

Of course, with both printers, you get more than lots of colour with very little noise; you also get simply outstanding value for money.

Quiet Colour Printing

For example, our new 24-pin KX-P2123 QuietPrinter offers, in addition to colour, superb print quality through one Super LQ and six LQ fonts, plus a truly impressive range of other paper handling and printing features. And, in terms of value for money, its 9-pin stablemate, the KX-P2180, is equally attractive. To see what we mean, just take a glance at the specification summary (opposite).

So if you'd like to know more about how to get some colour into your life, while keeping the noise out (and without breaking the bank), contact us now on (0800) 444220, fax (0344) 853707.

The KX-P2123 Colour QuietPrinter.



● 7 colours including black ● Noise level less than 47 dBA ● One Super LQ, six LQ and three draft fonts ● Outline and shadow font facility ● 240 cps draft, 80 cps LQ, 32 cps SLQ ● 3 paper paths, push/pull tractors, paper parking, zero tear-off and optional sheet feeder ● Epson LQ-860/IBM Proprinter™ X24E emulation ● Standard 14K buffer, expandable to 46K

The KX-P2180 Colour QuietPrinter.



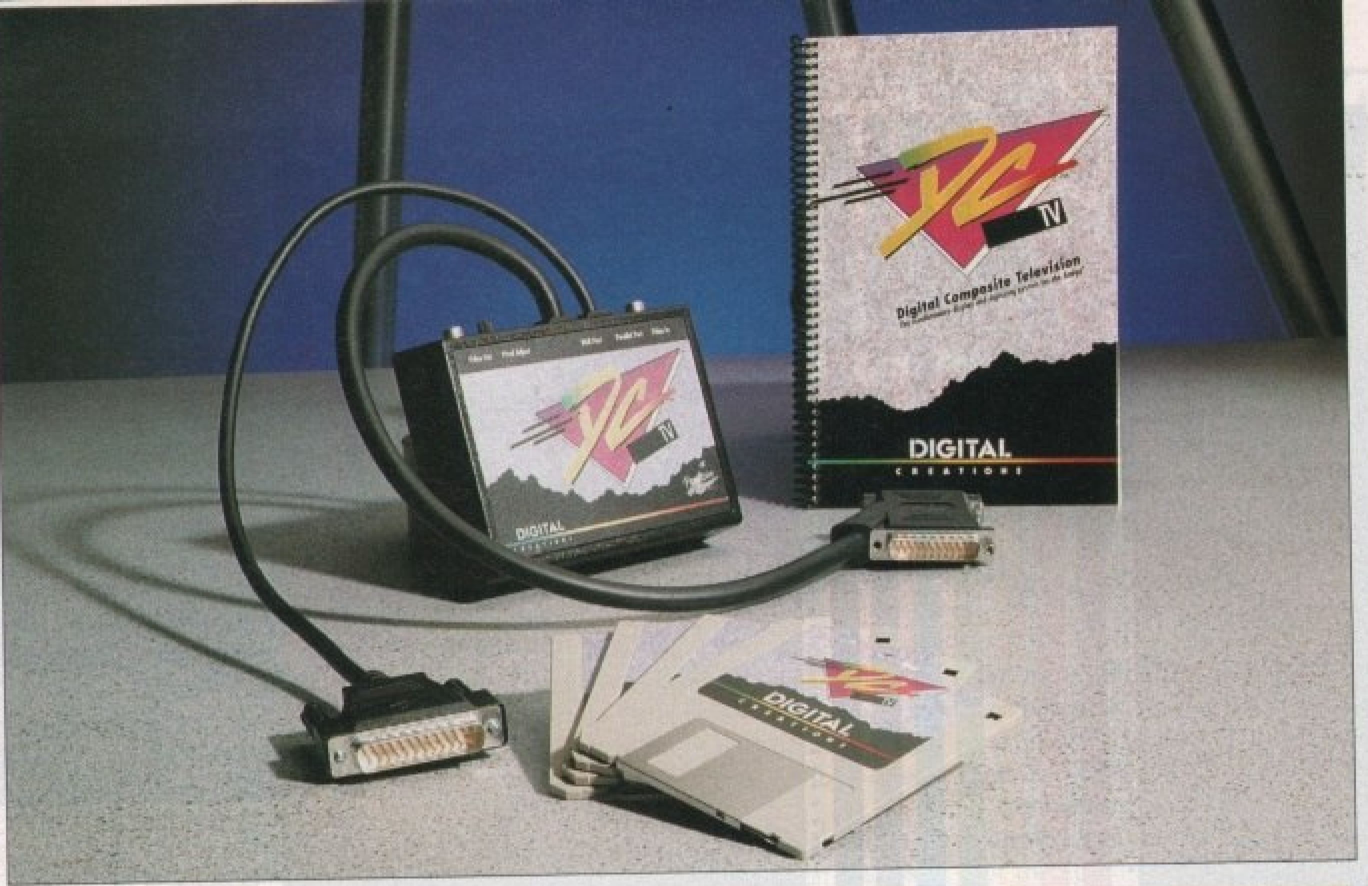
● 7 colours including black ● Noise level less than 48 dBA ● Six NLQ and three draft fonts ● 240 cps draft, 38 cps NLQ ● 3 paper paths, push/pull tractors, paper parking, zero tear-off and optional sheet feeder ● Epson FX-850 and IBM Proprinter III™ ● Standard 4K buffer, expandable to 36K

Panasonic
Printers

HMSO

All trademarks acknowledged. Note that colours seen in this photograph are simulated due to reproduction processes. Public sector customers may purchase at preferential terms from H.M.S.O. Contact 0603 695557.

AC/5/92



The making

The 24-bit buyers' guide

In this month's mega monster feature, *AC's* Paul Austin and Stevie Kennedy provide the definitive guide to upgrading your Amiga

Perhaps the biggest Amiga success story has been the well documented 24-bit invasion. To be honest this is only the tip of the iceberg and has occurred almost entirely because of the catalyst of acceleration which the ever-growing band of 030 and 040 boards have brought with them.

Without acceleration, the Amiga's domination in the virtual world and expertise as a multimedia workstation would never have happened. Now, thanks to plug-in acceleration, a standard machine can be transformed from an impressive multitasking workhorse into a fire-breathing powerhouse running between 20 and 30 times faster than in its standard form.

Now, ray tracing and other processor-hungry applications have been transformed from overnight endurance trials into artistic flights of fancy which appear in moments as opposed to hours – or even days.

Obviously speed isn't the only element in the multitasking equation, as extra RAM becomes equally important when you need to apply several programs simultaneously. Here again we plan to clear up a few myths surrounding the merits of both 16- and 32-bit memory – hopefully guiding you to the perfect choice for your particular Amiga-based exploits.

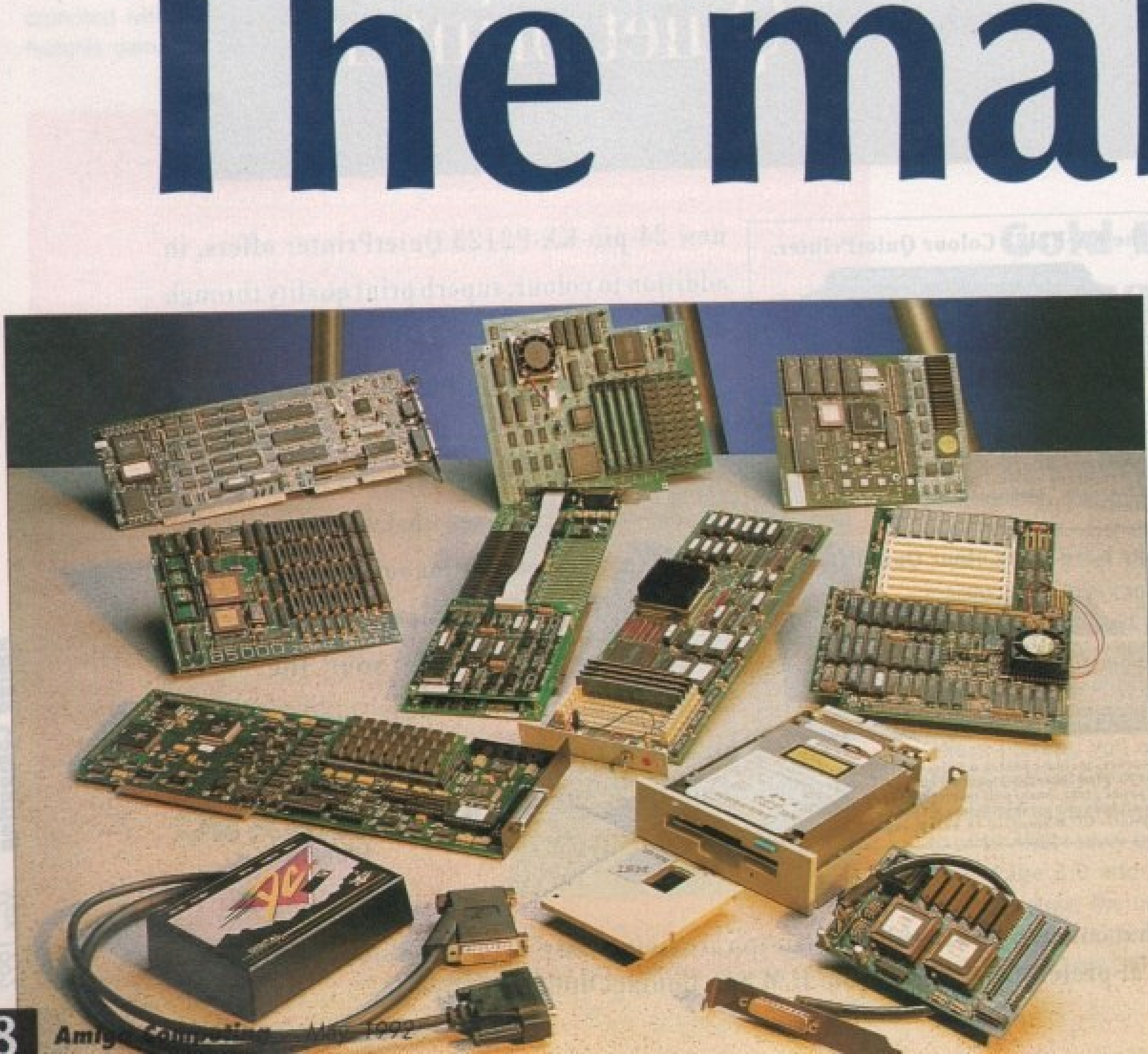
DCTV

If you glance down the price list of available graphics systems, DCTV stands out alongside AVideo as far and away the cheapest option on offer. However, it's worth remembering that at present there's a small sacrifice to be made for the impressive cash saving – that of output.

Unlike all the other systems, DCTV does not supply an RGB output. At the moment it offers a purely composite signal – although there are strong rumours that an RGB option is soon to be added.

RGB or composite, that is the question, but what is the difference? Well, in short it is clarity. With RGB you see the image in its purest form – basically all the colour data appears onscreen and, to use an acronym from the world of wordprocessing, it's a wysiwyg (what you see is what you get) display. In the case of DCTV you're forced into the compromise of composite. As a result, the original RGB output is converted into a lower quality composite display. Although this may sound dramatic, it's not as bad as it sounds. For example, if you want to produce art or animation which in its final form is to appear on video, DCTV is ideal.

Because VHS video works entirely with



The components for what could be the world's most powerful Amiga

an interlaced composite image, a composite input signal is ideal. The big bonus for DTV fans is that with the system you always know exactly what your art is going to look like. As a result, any bleeding or excessive saturation can be spotted well before committing your creations to tape.

This attribute of DCTV's output is, if anything, a bonus rather than a restriction, as the conversion from RGB to composite – which has to take place with any VHS video production – can throw up some very nasty results if the colours within the RGB signal exceed 191, or around 12 in the Amiga's colour palette.

Added attractions

Aside from the price, DCTV also boasts some impressive added attractions. At the forefront of these is the built-in frame grabber which allows you to capture images from video and import them directly into the paint package. The importance of this option can't be stressed enough as it adds a huge amount of potential to your art.

The final bonus concerns the system's option to save its creations as standard 24-bit files. As I mentioned earlier the composite display can't show RGB in all its glory, but the system still gives you a good idea as to how its RGB alternative would actually appear.

Perhaps the easiest way to describe the difference between a DCTV and an RGB image is to equate it to the display quality between a monitor and a TV. The ideal application for DCTV is perhaps self explanatory. As an intro level videographic system, DCTV is almost impossible to beat.

With perfect composite output, built-in frame grabbing and the option to store its images in its own display format occupying only around 50k as opposed to the 500k that the same RGB image would require, it's ideal, and perhaps the perfect vehicle for budget 24-bit animation.

Having moaned about the lack of RGB, it's perhaps worth mentioning that even with the constraints of composite, DCTV still manages a palette of between four and eight million colours – impressive figures, especially if you need to keep a close eye on your finances.

Image quality
●●●●●●○○○○
Flexibility
●●●●●●●●●●
Software support
●●●●●●●●●●
Value for money
●●●●●●●●●●
Overall
●●●●●●●●○○



AVideo preview

This is the latest board on the market and comes in either 12- or 24-bit format, retailing at an amazingly cheap £599 for the 24-bit variant and an equally impressive £249 for its 12-bit counterpart. We haven't tested the board fully, as the one sent for review was a demo, which was returned due to our policy of not reviewing anything but finished products.

Nevertheless, we can still bring you the relevant bullet points in way of a warm up for the no holes barred, bare bones, two-page special in the next issue of *AC*.

As far as features go, the new board appears to be well blessed with a full 24-bit display, 768 x 580 video spec resolution, a double 12-bit 4,096 buffer plus the option to overlay Amiga graphics and animation. As if that wasn't enough, it's also fully genlockable and claims to run on a standard 1Mb machine, although in reality an accelerator is a necessity rather than a luxury.

Aside from its internal features, perhaps the biggest attraction has to be the inclusion of TVPaint 1.5, the software package that's widely regarded as the premier 24-bit paint program.

As I mentioned earlier, the board has not yet had a thorough test so I don't want to speculate too much about its particular features. Nevertheless, if the bullets are an accuracy guide it appears that the AVideo option could be the perfect product for the general 24-bit user on a budget.

Tune in to the June issue for the next thrilling instalment of the AVideo story...

of a monster

GVP's IV24

The IV24 made without doubt the biggest marketing splash last year. The board hit the streets in a blaze of glory with a collection of bundled software which includes Caligari, Scala and MacroPaint. On top of the additional goodies come built-in extras such as picture-in-picture or PIP, on-board frame grabbing, in line flicker fixing and full broadcast spec display.

Sounds great, doesn't it, but I'm afraid it's not quite as big a bargain as it first appears. The first let-down concerns the bundled software. Both Caligari and Scala have been seriously restricted in relation to their original forms and in all honesty don't deserve the same titles as their standalone ancestors.

MacroPaint, on the other hand, is ➤



indeed all that its forerunner ever was and perhaps even more. Unfortunately this still only makes it a very mediocre package in relation to other 24-bit paint programs.

Having said that, the problems related to MacroPaint are likely to be the result of the board's unusual method of updating its display rather than a fault within the software itself. Unlike other systems, the IV24 doesn't send its output direct to the screen; instead all data is first sent to the flicker fixer in a series of separate blocks. On arrival the data is processed by a built-in library into the necessary format for the screen.

As you can imagine, this can be a lengthy process and causes a very noticeable delay during screen update. Apparently this limitation is unavoidable due to the architecture of the board – as a result, its appeal to freehand artists has to be badly affected.

The final cause for concern is the application of some of the board's more exotic features, such as PIP and internal frame grabbing. Unfortunately, both of these features need an RGB input signal to operate – not an easy thing to obtain from a standard VCR.

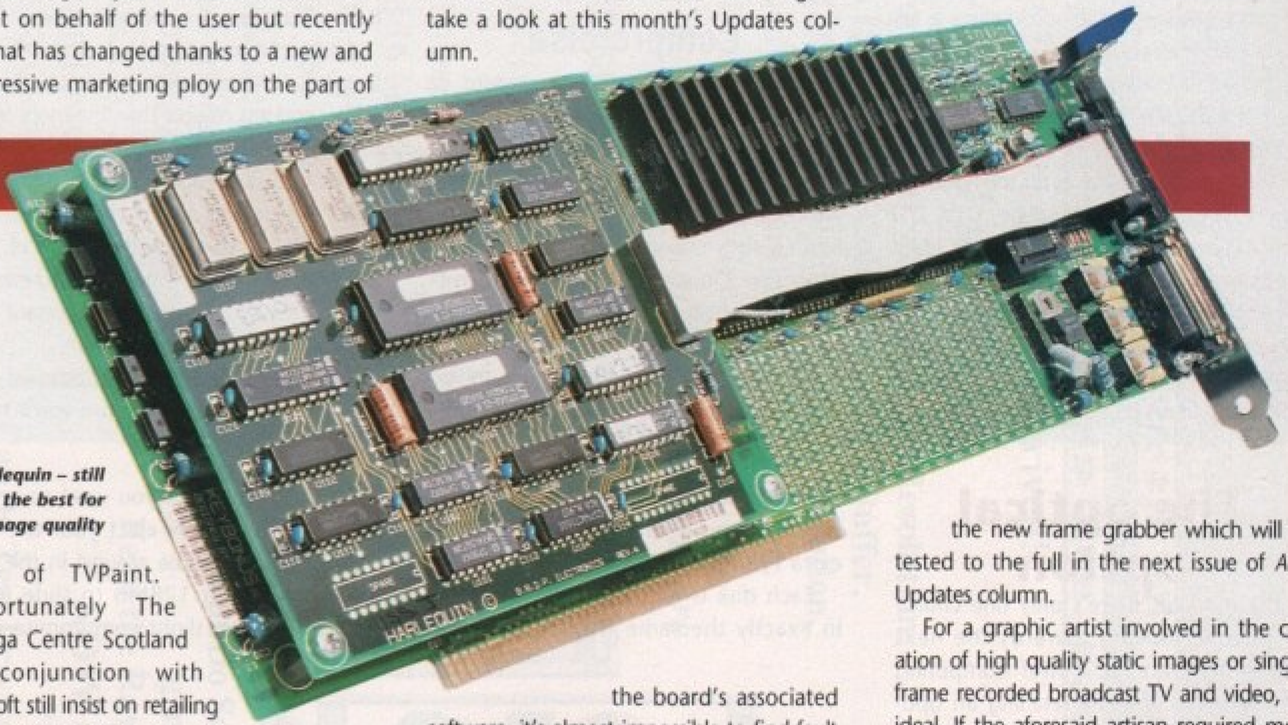
As a result, anyone with a VCR or camcorder which doesn't support RGB would needs an external RGB-to-composite converter. Originally this meant extra investment on behalf of the user but recently all that has changed thanks to a new and aggressive marketing ploy on the part of both Silica Systems and GVP. See this month's Updates column for further details.

Although the above may appear to be solid doom and gloom for the board, it's by no means as redundant as it may sound. For multimedia applications, even with the restrictions on screen update, it still remains one of the most flexible boards in the business for general 12- and 24-bit applications.

With the constant release of third-party support software, it's future as a potential multimedia workstation may well become its saving grace. For more details on TVPaint and the IV24, again take a look at this month's Updates column.

Image quality
●●●●●●●●○○
Flexibility
●●●●●●●●○○
Software support
●●●●●●○○○○
Value for money
●●●●●●○○○○
Overall
●●●●●●○○○○

Harlequin



Harlequin – still the best for image quality

Perhaps the biggest compliment that we could pay to the Harlequin is that it was the first serious 24-bit board available on the machine and has remained the benchmark by which all subsequent 24-bit releases have been judged.

It wouldn't be unreasonable to say that the Harlequin, along with the soon to be released 32-bit Imagica board from G2, is firmly aimed at the professional graphic artist who sees quality as his or her prime concern. The image quality and resolution of the board still remain unrivalled. This in itself is an impressive testament.

When you combine image quality, unrivalled resolution, 32-bit architecture and the optional Alpha channel which can be used to produce seamless transitions between video- and computer-generated images, plus additional special effects, the Harlequin is by any standards an impressive product.

To add the finishing touches, the Harlequin benefits from the very latest version of TVPaint. Unfortunately The Amiga Centre Scotland in conjunction with Tecsoft still insist on retailing the aforesaid package at a frightening £800 plus VAT.

This is especially infuriating considering the new AVideo board comes complete with TVPaint as part of a standard package and still manages to retail at under £600 for the complete system.

Aside from the rather inflated price tag of the board's associated software, it's almost impossible to find fault with the application and output of the software/hardware combination. Nevertheless this doesn't mean the board is faultless.

What it does it does perfectly, but it's perhaps what it doesn't do that in the past has been be its only flaw. Although as a display platform it's unsurpassed, the lack of a built-in frame grabber severely affects its flexibility and effectiveness for general 24-bit applications.

However, there could be light at the end of the tunnel in the form of a dedicated frame grabber which at this very moment is winging its way to the office, and claims to work perfectly with the board retailing for around £240.

As a platform for ray traced and hand-drawn 24-bit images, it's still easily the best. As a general purpose utility board its case could soon be improved by the release of the new frame grabber which will be tested to the full in the next issue of *AC*'s Updates column.

For a graphic artist involved in the creation of high quality static images or single-frame recorded broadcast TV and video, it's ideal. If the aforesaid artisan required more general abilities it might be worth waiting for our review of the new Imagica board – with built-in frame grabber – before making a final decision.

Image quality
●●●●●●●●●●
Flexibility
●●●●●●●●○○
Software support
●●●●●●●●●○
Value for money
●●●●●●●○○○
Overall
●●●●●●●●○○

Imagica VD2001

In the world of Amiga-based 24-bit art, the VD2001 is definitely the old soldier of the collection. This particular unit was the very first 24-bit board. Although old, it still boasts very impressive software and additions such as a built-in frame grabber. Although rather elderly, it remains a fast and impressive product. Having said that it does have one major disadvantage.

The problem is simply that of resolution. Even at its best the board cannot supply a video spec signal. As a result, its usefulness for video-based art is extremely limited. However, with an aggressive marketing campaign by G2 Systems the board could easily enjoy a new lease of life.

As a video workstation, it's been superseded by more recent releases. As a bog standard 24-bit paint and ray tracing platform, it's only bettered by the likes of Harlequin and TVPaint. Basically if you're not interested in video it could well be worth a closer look, especially if G2 decide to reduce the price of the board and the associated Imagica paint package.

Image quality
●●●●●●●○○○
Flexibility
●●●●●●●○○○
Software support
●●●●●●●○○○
Value for money
●●●●●●○○○○
Overall
●●●●●●●○○○

Graphics jargon buster

Composite	RGB and sync combined into a single signal
RGB	Separate signal for each component colour plus a sync signal
Alpha Channel	Available on 32-bit boards allowing external software to apply enhanced video effects such as graduated transitions between video and computer -generated images
24-bit board	Display card capable of showing images made up of over 16.7 million colours
32-bit board	Identical maximum image capacity as 24-bit but with an extra eight bits available for additional software-controlled image enhancement

Hard drives

Possibly the biggest problem concerning upgrading isn't the initial cost of the specific bits of additional kit, but the associated odds and ends that are almost essential for any serious application of your new toy.

For example, ray tracing without an accelerator and a hard disk is akin to root channel work without anaesthetic. All three go hand in hand. The same applies to almost every power application. As a result, a good quality and in some cases a fast hard drive is essential.

For A500 owners the ideal choice has to be the A500HD+. It's not the cheapest but it's certainly the one of the fastest, most reliable and flexible drives for the A500. For applications such as animation, DTV, DTP and multimedia, the A500HD+ is ideal. With an access time of 11 milliseconds and a transfer rate of around 1Mb a second, it's perfect.

Other benefits include a built-in SCSI interface, an on-board 64k cache, plus the option for up to 8Mb of extra RAM. Although you may think a single HD is all you'll ever need, believe me if things get serious it will take no time at all to fill a 52Mb drive and eat up your existing RAM – especially if you're working in any of the areas listed above.

As a result, the option for additions via a SCSI connection and extra RAM on board could well make the initial added investment worth it.

Compromise

If you're not quite so dependent on speed, another drive entitled the Hobbyte A590 could be the perfect compromise between speed storage and expense. Although it too boasts a SCSI interface, it's limited to a maximum of 2Mb of RAM expansion. On the good side it is, on average, £100 cheaper than the GVP A500HD+ and yet still offers a 52Mb Quantum.

The word Quantum is quite literally synonymous with quality. If you have a choice of drives always go with a Quantum, even if there's a bit more expense involved.

Other common formats include XT and Seagate. Although both do the job, they're slower and less reliable than the more technically advance Quantums.

The option of choice is usually limited to 1500 owners and above. Nevertheless the rule is always to check the brand of any drive before parting with your hard-earned cash, as it's by far the most important element within the unit.

If you've made the extra investment and plumbed for a 1500 or above you'll have the added bonus of Zorro slots. With these little beauties, expanding your machine's horizons becomes infinitely easier than for those limited to the A500.

Again, the hard card question is a case of horses for courses. If you're simply looking for expanded storage, the Zorro-based hard disk can be infinitely more cost effective than that of the A500.

Cheap hard card and hard drive combinations are many and varied. The only proviso is to think long and hard about your choice of hard drive, Quantum again being the perfect choice given sufficient funds.

Perhaps most important when upgrading any desktop-style Amiga with a hard disk is the card onto which it sits. Like the top of the range A500 drives, the best hard cards come with the option of a full complement of 8Mb additional memory plus a built-in SCSI interface.

Boards such as the GVP Impact series 2 and the Nexus boast all of the above and take control of additional SCSI peripherals to the limit by handling up to seven extra SCSI devices from a single card.

If you're unlikely to go any further than a single drive and don't require extra RAM on board, perfect choices include the Dataflyer from Hard Cache Ltd and the IVS Trumpcard from Diamond. Even with these initially basic cards there's still an option to upgrade later with additional daughter boards and optional SCSI pass-thru cables.

The optical option

At the moment there's only one choice for anyone looking towards the next step in mass storage. Power Computing are the only company retailing an optical drive in the UK. At first glance the optical appears a rather pricey option, but as someone once said, looks can be deceptive.

With the internal version retailing at £999 plus another £199 for the controller card, this IBM convert is sure to put the financial fear of God into even the most stout-hearted among us. The same financial terror equally applies to the optional external version.

Cost effective

Having recovered from the shock of the initial expense, however, the optical is easily the most cost-effective system for the high-end user. If you're into animation, 24-bit art, serious DTP or in fact any area in which the Amiga requires an almost limitless amounts of storage, an optical is the perfect choice. The initial cost is indeed grim but from then on an extra 128Mb is only £30 away.

Each disk is formatted and initialised in exactly the same way as any other hard disk. Whenever you want to access another disk simply eject your the current one and fumble around in the disk box for another 128Mb to slide in its place. The only slight compromise concerns the seek or access time of the drive. A fast hard drive will locate the necessary data as quickly as 11 milliseconds, and Commodore's A590 will manage 28ms.

The optical, however, only manages 60 milliseconds. This may sound a tad disappointing, but in the optical world this is about standard rather than a slow exception. To offset the slow access time, the drive has an exceptionally good transfer rate which peaks at an impressive 1.5Mb per second. On big files this more than makes up for the initial delay in locating the data.

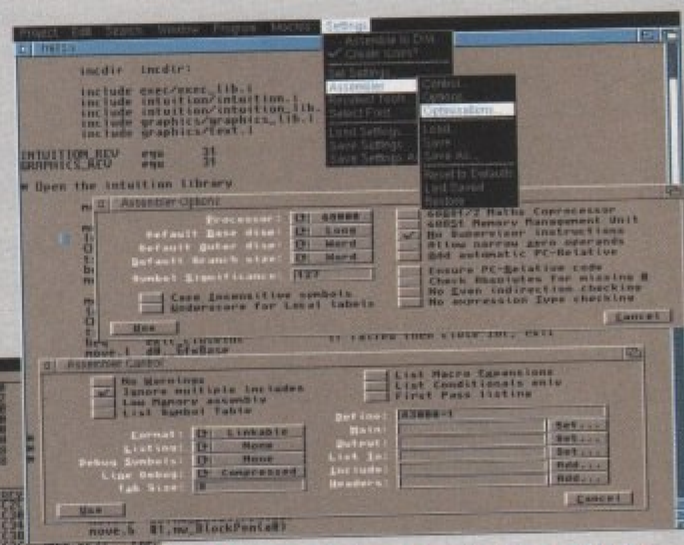
The only optical alternative is to go for an even bigger version of the Power drive. In this case it's a GVP IBM variant 650Mb optical with almost identical access and transfer rate as its 128Mb counterpart. These are available from Silica Systems but it would require a one-off import from the States, and as a result could work out to be a very expensive option.



Some things are worth waiting for ...

HiSoft Devpac 3

Devpac Version 3 is here at last. The two earlier versions of HiSoft Devpac for the Amiga set a standard in 68000 assembly language programming which was hard to surpass, but we think that we've done it. This new package has had a complete face-lift, from the editor through to the debugger; in fact so many features have been added and improved that we feel confident in the claim that Devpac 3 is the ultimate assembly language development system on the Amiga ... for now!



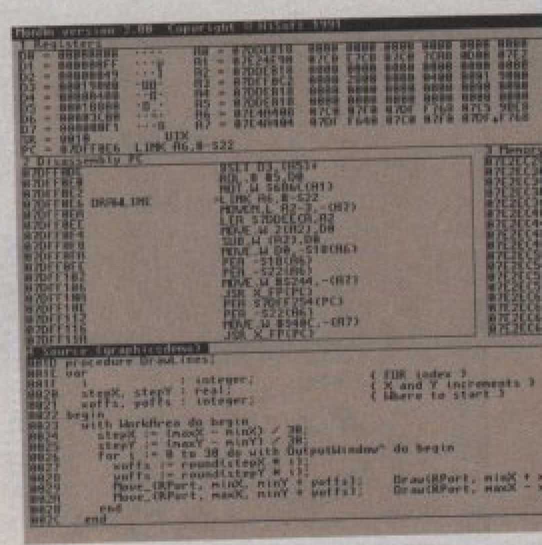
Devpac 3 gives complete control over the assembly process

The Editor

A new multi-window editor with bookmarks, mouse block-marking, macros, complete window flexibility (including multi-views on one file), extensive user configuration and full integration with the other Devpac programs. The editor makes use of Workbench 2 or 1.3 automatically.

The Assembler

Improved and extended, the Devpac 3 assembler is now at least 40% faster than its predecessor (without pre-assembly), supports the full 680x0 range of processors including the maths co-processors and has a tremendous number of switchable optimisations. With the ability to pre-assemble files for inclusion, it can now claim to be the fastest assembler on the Amiga.



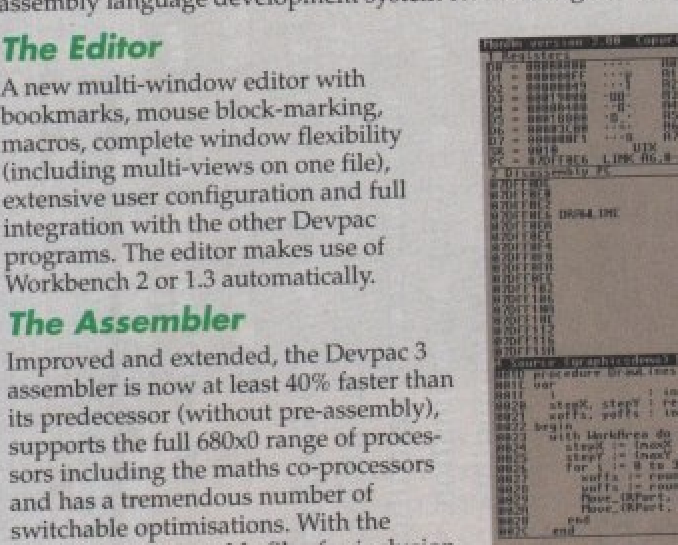
the debugger supplied with both packages

The Debugger

Devpac 3 is provided with a versatile debugger/disassembler for bug hunting and ease of learning. You can have as many views on your program as you like, including its source code; then set breakpoints, single-step instructions etc. even at a source code level. Again, there is support for all the new processors and the floating point chips.

Devpac 3 comes complete with all the necessary include files, a linker, many examples and a clear, helpful manual.

HighSpeed Pascal



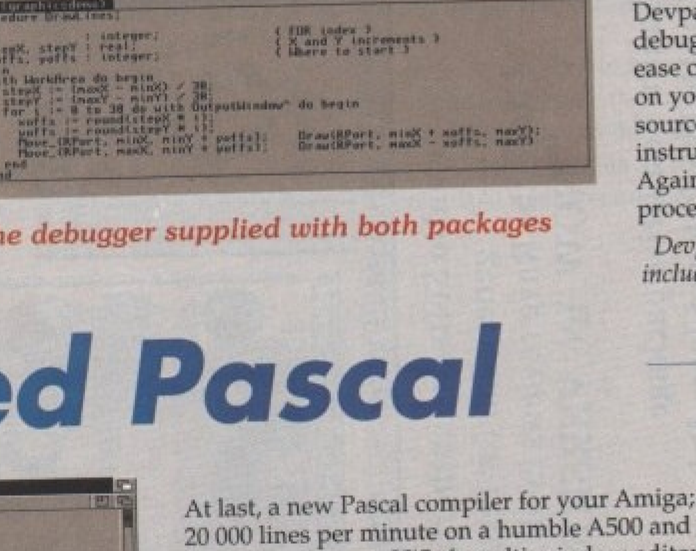
error detection is fully interactive

At last, a new Pascal compiler for your Amiga; HighSpeed Pascal. Compiling at close to 20 000 lines per minute on a humble A500 and with a fully integrated environment (based on the new HiSoft multi-window editor), HighSpeed Pascal is the answer to your programming prayers.

The compiler is very close to the standard set by Turbo Pascal 5 on the PC and enables you to port programs directly from the PC or ST - even the BGI unit is provided for graphic compatibility. You can compile separate units, link with assembler or use the inline assembler provided and we also supply a special version of our 680x0 debugger which allows you to debug Pascal programs at a source code level.

The full Pascal language is supported including such worthy additions as structured constants, flexible string handling and absolute variables.

HighSpeed Pascal comes complete with all the necessary files for working with the Amiga's operating system, a host of examples and a professional, ring-bound manual.



HighSpeed Pascal is remarkably friendly and easy-to-use

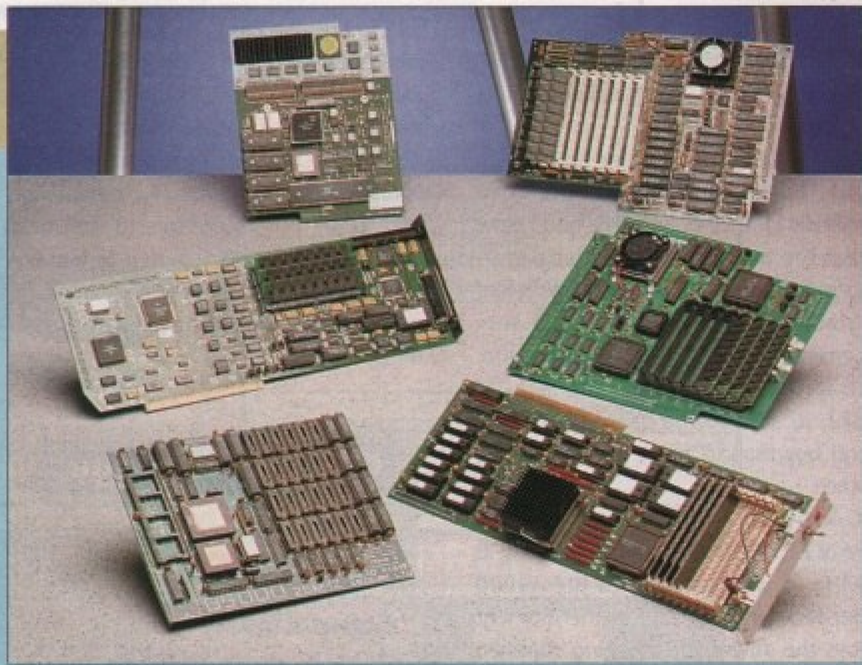
HiSoft Devpac 3 (£69.95) and HighSpeed Pascal (£99.95) should be in your local computer shop soon. If you have difficulty locating a copy, you can order directly from HiSoft using Access/Mastercard, Visa, UK debit card (Switch etc.) or a cheque/postal order. Mention this magazine when ordering to receive a free T-Shirt or mouse mat (offer subject to availability).

HiSoft Devpac 3 and HighSpeed Pascal are just two of the products that we supply for your Amiga. Other titles include: ProFlight, HiSoft BASIC, Extend, SAS/Lattice C 5 and HiSoft C. For more details contact us at - HiSoft, The Old School, Greenfield, Bedford MK45 5DE UK.

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HiSoft
High Quality Software

Accelerators



In terms of value for money and sheer choice, the user with an eye to speeding up his or her Amiga has, if you'll forgive the cliché, never had it so good. The selection of accelerator cards now on offer ranges from the sub-£200 ICD AdSpeed card to the latest £2,000+ 68040-based Single Board Computers (SBCs) complete with their own hard drive interfaces, memory, parallel, and serial ports.

Those charged with the task of categorising this impressive array of power add-ons cannot, unfortunately, profess to have "never had it so good". If anything, the job of recommending a single board is now well-nigh impossible. So we won't.

Reasoned

This section is aimed at users with a specific purpose in mind and a budget within which to work. No definitive "this is the best card of the lot" answer will be given. Instead, we'll concentrate on value-for-money and compatibility with the sort of aims one might have for such an expensive peripheral.

Put simply, the aim of all prospective upgraders is raw speed, but if you approach the issue thinking only of percentage points and hundredths of a second, you'll either end up spending too much or will settle for a card which doesn't meet your requirements.

So what requirements are these? The worst thing that could happen to you is to discover, after spending £1,500 on a wonder-widget, that it crashes out every time you try to use the software package you bought it in order to enhance. The second worst thing is to realise that the package in question doesn't run much faster than before.

To avoid such disasters, users should first of all decide in which area their software is most heavily speed-dependant. If you are using a turbo ray tracing package, for instance, you'll need a fast maths co-processor (Floating Point Unit, or FPU) and enough memory to run at least your Workbench and ray tracer. Ray tracers live and breath mathematics, and the FPU speed is all-important to them.

This means that a 68030 card with 25MHz CPU, 25MHz FPU, and 4Mb of 32-bit RAM would suit your needs better than a 33MHz 68030 with no FPU. The latter would be appear to be faster, but the 25MHz FPU would outperform it in most number-crunching tasks.

Again, with the price of 68030 cards falling rapidly this year, many users will opt for one of these rather than spend the extra hundreds for an 040. The 68040 cards are undoubtedly several rungs higher on the speed ladder but prices, with the possible exception of the new Fusion Forty, tend to follow suit. Why spend hundreds extra on luxury when utility will suffice?

A second price consideration now comes into play, however. The 68040 chip has an FPU built-in, but the 68030 does not. When many manufacturers quote you a low price for their entry-level 68030 card, you should check whether the price includes an FPU. If it does not, you could end up spending a couple of hundred more to get the best performance from your ray tracer.

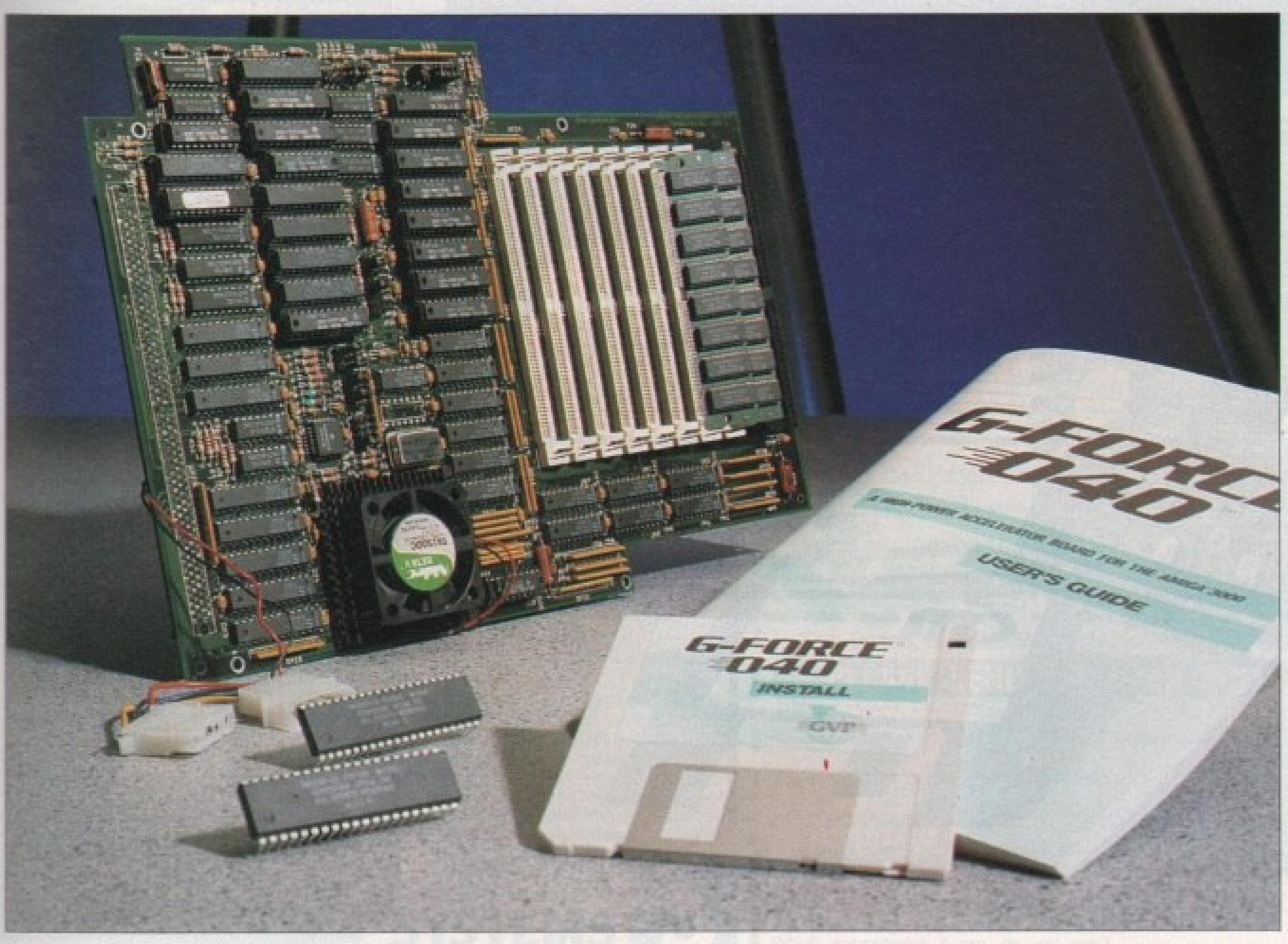
Cheaper

If your most pressing need is to make ProPage or PageStream work fast enough to design your magazine on time, you might find that a combination of one of the cheaper 68030 cards and a multisync monitor with flicker fixer will work best.

The money you'd save by going for the cheaper board would pay for the monitor and flicker fixer, and the corresponding screen refresh improvement is a great help when working in such a screen-orientated wysiwyg environment. Put another way, it is too easy to see an accelerator as an individual unit. They may cost much more than any other peripheral you'll ever buy, but they are peripherals all the same and must coexist with your existing system and software.

Some users will find that their new super-fast card has almost negligible perceivable impact on the speed of their software. In particular, any piece of software which has never left you yawning while working on a 68000 system is not the ideal candidate for an expensive speed boost.

That said, if you're into ray tracing, 24-bit graphics, DTP or animation you'll have to make the choice at some stage, so let's take a stroll down the boardwalk.



The GVP series

Great Valley Products (GVP) were one of the early entrants in the Amiga accelerator scene and have built a deserved name for speed and reliability over the past few years. Their 25MHz 3001 card is still one of the most widely used of all boards, despite being superseded by 33MHz models and the new 68040 cards.

The latest GVP accelerator range includes the Combo cards, a 50MHz 68030 card, and the new G-Force 68040 board.

The 22MHz Combo card includes in its £599 retail price a 25MHz 68882 FPU, 1Mb of 32-bit RAM and an integral 32-bit SCSI hard drive controller. The speed improvements offered by a 22MHz system might not satisfy the semi-professional, but for DTP and graphics enthusiasts it should be sufficient and provides an excellent just-about-affordable entry-level board, especially as it negates the need to buy a hard drive interface.

Remember, however, that the basic 1Mb RAM included in the £599 price tag is not enough for most uses, and the card should be bought with extra memory. A ➤



1Mb GVP-specific SIMM for the card will cost £69, which as you'll notice is quite expensive.

This is because GVP use fast (60 to 40ns) "burst mode" SIMMs designed specifically for their boards. The good news is that the boards have a better performance as a result, and the bad news is that upgrading a GVP card can be a very expensive exercise. The 33MHz Combo, with its basic 4Mb RAM and 33MHz 68882, is, at £999, probably a better all-round buy than its more pedestrian little brother.

G-Force, which has a deceptive entry price of £1,799, is a 68040 card running at 28MHz. It works only with the A3000 under Kickstart 2.04, but at the moment enjoys the advantage of being supplied with free 2.04 upgrade ROMs for owners of older A3000s.

The card is certainly fast, and has the mark of quality construction you'll find with every GVP card, but our preliminary tests showed it was a shade slower than the Mercury and Fusion Forty boards. To add to this, the basic specification G-Force comes with no RAM, is expandable only to 8Mb, and relies on GVPs high quality, but expensive, RAM upgrade SIMMs.

Those fast SIMMs should stand the G-Force in good stead for 24-bit animation and so on, but you'll have to wait until next month's 68040 Supertest to find out just how well the boards perform in practical application and over a longer period of time.

GVP Combo range

Speed
●●●●●●○○○○

Compatibility
●●●●●●●●●○

Value for money
●●●●●●●●○○

Overall
●●●●●●●●○○

GVP 3050

Speed
●●●●●●●○○○

Compatibility
●●●●●●●●●○

Value for money
●●●●●○○○○○

Overall
●●●●●●●○○○

GVP G-Force

Speed
●●●●●●●●○○

Compatibility
●●●●●●●●●○

Value for money
●●●●●●●○○○

Overall
●●●●●●●●○○

Computer Systems Associates

CSA have been in the market with their Mega Midget Racer cards for some time now, and they have a name for reliability. The design of the Racer is a standard "piggy-back" layout which requires the Amiga to be opened, its 68000 levered out and stuck on the accelerator board before the whole lot is plugged back into the CPU socket on the motherboard.

Mega Midgets are available in a variety of configurations from low-price units with only a 68030 and no RAM or FPU, up to 50MHz CPU and FPU with 8Mb RAM on a RAM card slotting on the side of the Midget Racer board. The boards perform well in practice and after the initial hassle of installation they hardly ever come to the user's attention.

As far as value is concerned, the Mega Midget Racers are quite close to Solid State Leisure's A/B5000 cards. Benchmark tests indicate that there is little to choose between CSA and SSL cards with similar configurations, though I personally would be surprised if the CSA boards, with their compact surface-mounted design, didn't work out as more reliable in long term.

The latest CSA accelerator is one of the most fully-featured cards available at the moment.

CSA Midget Racer

Speed
●●●●●●○○○○

Compatibility
●●●●●●●●○○

Value for money
●●●●●●●○○○

Overall
●●●●●●●○○○



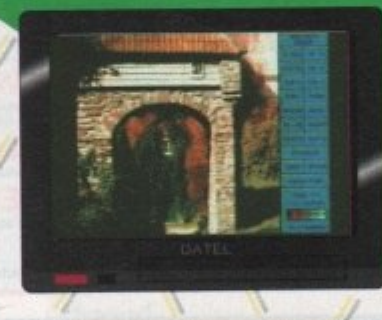
Magnum 40/4

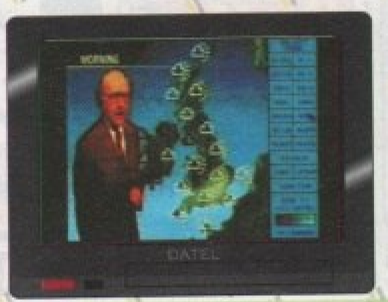
As this article is being written, the first Magnum 40/4 ("forty-four") cards are on their way across the Atlantic, bringing with them a 33MHz 68040, SCSI2 hard drive interface, RS422 serial port and parallel port, making them the first of a new breed of Single Board Computers (SBCs) to be released in this country.

At an asking price of $3,995, the 40/4 is not for the enthusiast, but the first two 33MHz boards were sold to the Pentagon and it can't be long before this sort of top-end technology starts to push the Amiga into areas in which it has never before been used. Look out for a full review of the 40/4 next month.

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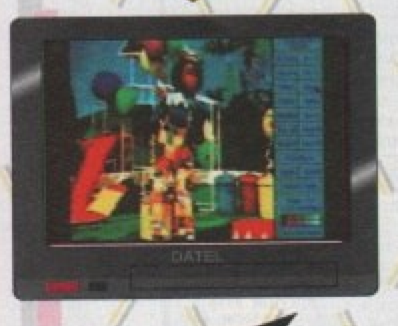






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RCS Fusion Forty



If you saw our review of the original Fusion Forty card, you'll know just how severe a caning it received at our hands. Happily for RCS, the new board is so much better than the first one we reviewed that I find it difficult to believe it is the same product.

Running at 28MHz and sporting brand new ROMs and software, the latest Fusion Forty works only with Kickstart 2.04 and is very fast indeed. It is also more stable by several orders of magnitude, and popped its clogs only once during our test period – something all the other boards did.

According to the AIBB3 benchmarks, used nowadays by most manufacturers and testers, the Fusion Forty beat G-Force in some benchmarks, and the Mercury in others, which is pretty good for a card which had such an inauspicious start last year. With its new price of £1,395, Fusion has to be the best buy for speed-hungry A2000 owners, especially as this price includes 4Mb RAM on board.

The one annoying niggle remaining with Fusion Forty is its hatred of 16-bit fast RAM. With a RAM expansion card fitted to your A2000, Fusion will refuse to kick up as it maps its own memory exactly where the auto-configuring 16-bit RAM wants to go. The result is that you have to disable the RAM card's auto-configure mode (assuming the card has a jumper for this – not all of them do), then use the software supplied with your card to add the memory after boot up.

This is a fairly silly situation, but as long as you intend to stick in 040 mode, the 4Mb on a basic Fusion Forty should keep you going. On the other hand, you'll need 8Mb to fully utilise some software, such as TVPaint, and if you kick up in 68000 mode, you'll have only the standard 1Mb to play with unless your RAM card can be manually configured.

Users and prospective buyers shouldn't despair, though, as RCS's software engineers are shipping new versions of the software to solve the problem as we go to press.

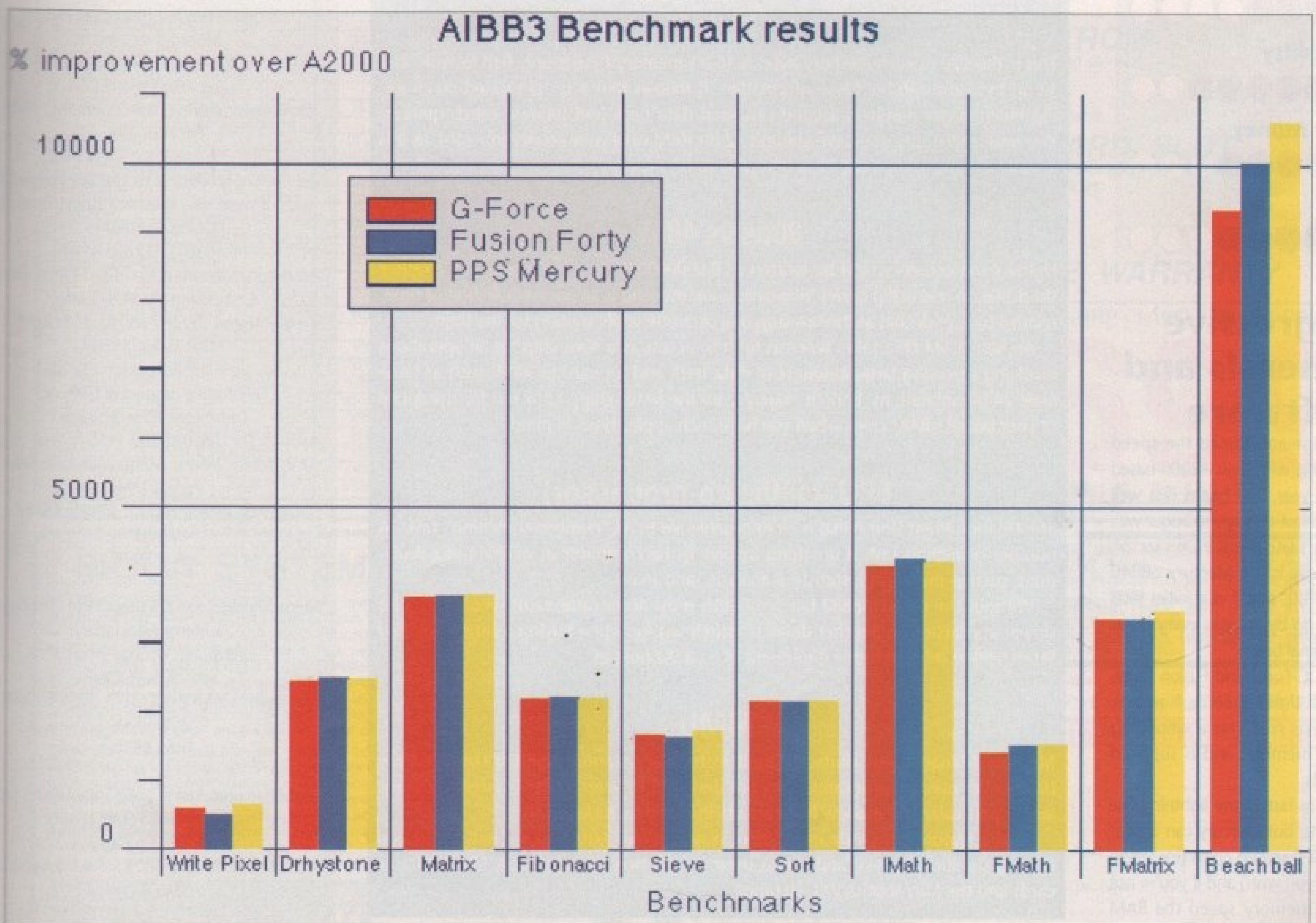
RCS Fusion Forty

Speed
●●●●●●●●●○

Compatibility
●●●●●●●●○○

Value for money
●●●●●●●●○○

Overall
●●●●●●●●○○



In a straight race, Fusion and Mercury are almost neck and neck, with G-Force half a length behind

Solid State Leisure

Just about the only British company presently designing and building their own accelerators, Solid State Leisure offer a range of competitively priced 68020- and 68030-based systems. The range starts with the A5000-16, with a 16MHz 68020 and 1Mb RAM for less than £300, and goes all the way up to the B5000-40, including a 40MHz 030 and 4Mb RAM.

The only board in the range to fit in an A2000 Zorro slot is the B5000-40, the rest being designed as piggyback units. They all perform well, and in certain configurations are excellent value for money. Build quality wasn't as good as most of the other boards we reviewed, but the B5000-25 on test performed reliably enough.

The cards are as easy to fit as any other piggyback unit, which means not very, and fitting will invalidate you warranty in any case. For A500 owners there is little choice until the card-in-a-box Golum Turbocard becomes available, so if they choose either an SSL or CSA unit they'll just have to live with it. Console yourselves with the thought that fitting anything in an A3000 fast slot is hell itself.

SSL B5000-25

Rating	Score
Speed	●●●●●●○○○○
Compatibility	●●●●●●●●○○
Value for money	●●●●●●●○○○
Overall	●●●●●●●○○○

Progressive Peripherals and Software

Progressive Peripherals joined the speed race late in the day with their A2000-based 68040 card last year. The board was well built, stable, and fast enough to augur well for the company's late thrust in this sector. PPS's latest release is the Mercury 68040 card for the A3000, and if our initial tests are anything to go by, it looks every bit as good as the original board.

Mercury, like G-Force and Fusion Forty, is a 28MHz card. Unlike G-Force, however, the PPS board has room for a whopping 32Mb of extra memory, and is supplied with 60ns SIMMs.

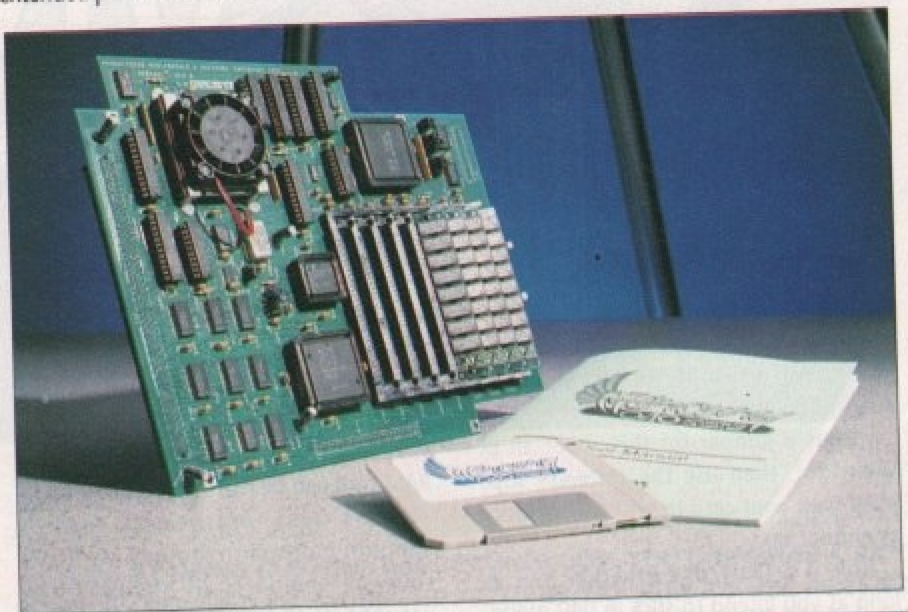
These aren't as fast as the lightning-like 40ns GVP SIMMs, but Mercury can accept a wider range of standard chips (including the 40ns type if you wish) and if you're not dependent on memory speed the RAM upgrade path is cheaper than GVP's. In terms of speed, Mercury performs well, even with its slower SIMMs, and just pipped G-Force on the AIBB3 benchmarks.

For those completely batty on percentage points, the differences are fairly noticeable, but in practice when working on something like PageStream you'd be stretched to say which card your A3000 was using.

We're reserving judgement until next month's 68040 test, by which time we'll have completed exhaustive tests using more practical applications, and had a chance to see how stable the boards are over an extended period of time.

PPS Mercury card

Rating	Score
Speed	●●●●●●●●●○
Compatibility	●●●●●●●●○○
Value for money	●●●●●●●●○○
Overall	●●●●●●●●○○



Acceleators jargon buster

32-bit

This is the size of each memory byte. A 16-bit memory byte is only half as wide as a 32-bit byte and can hold less information. It follows that a system based on chucking much larger numbers around can send data back and forward much quicker. You must make sure you have enough 32-bit RAM with your accelerator card, as it is a waste of time using a 68030 or 040 with 16-bit memory.

80ns vs 40ns

Eighty nanoseconds would be written as 0.000000080. In other words, it's a rather short blip. In microchip circles, however, a nanosecond is an appreciable unit of time, relative to a quick chat at the bus stop or a cigarette while waiting for the train.

An 80ns RAM chip takes twice as long to access as a 40ns chip, so all operations involving throwing large amounts of data back and forward in RAM, such as large scale 24-bit animations, benefit hugely from the faster chips. Look out for the speed of your board's RAM chips when you have such applications in mind.

FPU (maths co-processor)

The Floating Point Unit (FPU) is an invaluable aid to all "number-crunching" tasks. A number-crunching task is anything involving the computer in millions of calculations, such as ray tracing, statistical analysis, and so on.

Without the 68881/68882 family of FPUs most accelerator cards would run a lot slower in practice, so another detail to watch out for when buying a card is the FPU fitted. 68040 chips have the equivalent of a 68882 built in.

MMU

Memory Management Units are built in to every standard 68030 chip, but are hardly ever used by programs. They are designed to keep track of system memory, and in particular any shadow ROM area being used by Kickstart.

As the feature is so little used, there is now a 68EC030 chip without MMU and costing significantly less, and this is used on the new, cheaper CSA Midget Racer cards and the Microbotics VXL-30 range.

Product information

24-bit cards

Harlequin is a product of Amiga Centre Scotland
Distributor: Amiga Centre Scotland
Tel: 031-557 4242
Unit tested: Harlequin 2000, 2Mb VRAM, Alpha Channel
Price £1,100

DCTV is a product of Digital Creations Inc
Distributor: Silica Systems
Tel: 081-309 1111
Unit tested: Standard PAL DCTV
Price: £499

Imagica VD2001 is a product of G2 Systems
Distributor: G2 Systems
Tel: 0252 737151
Unit tested: Professional model
Price: £395 (standard model), £750 (professional model)

Impact Vision 24 is a product of GVP Inc
Distributor: Silica Systems
Tel: 081-309 1111
Unit tested: Standard IV24 bundle
Price: £1,799, to include free RGB splitter

AVideo 24 is a product of Archos Ltd
Distributor: Checkmate Digital
Tel: 071-923 0658
Unit tested: Standard AVideo 24/TVPaint bundle
Price: £599 (includes TVPaint 1.6)

Accelerators

Fusion Forty is a product of RCS Management Inc.
Distributor: Hydra Systems
Tel: 0203 471111
Unit tested: 28MHz 68040 with 4Mb RAM
Price: £1,395

Mercury is a product of Progressive Peripherals and Software, 464 Kalamath Street, Denver, Colorado 80204
Tel: (0101) 303 825 4144
Distributors: Marcam (081-941 6117), or Power Computing (0234 843388)
Unit tested: 28MHz 68040, 4Mb RAM
Price: US$2749.95

G-Force is a product of GVP Inc
Distributor: Silica Systems
Tel: 081-390 1111
Unit tested: 28MHz 68040 with 2Mb RAMs
Price: £1,949
Combo: 33MHz 68030, 33MHz 68882, 4Mb RAM
Price: £999

Mega Midget Racer is a product of Computer Systems Associates
Distributor: Omega Projects
Tel: 0925 763946
Unit tested: 25MHz 68EC030, 33MHz 68882, 2Mb RAM
Price: £850

B5000 is a product of Solid State Leisure Ltd
Distributor: Solid State Leisure
Tel: 0933 650677
Unit tested: 25MHz 68030, 33MHz 68882, 2Mb RAM
Price: £499

RICOH LP1200

Ricoh UK Ltd is part of the worldwide Ricoh Group of companies, originally established in Japan, in 1936. With a turnover of over $5 billion and 37,000 plus employees, Ricoh has been producing computers and peripherals since 1971. They are renowned in the industry as pioneers in the field of Office Automation Equipment and have won many awards for outstanding industrial design. Ricoh have employed all their expertise to produce a 'first' in laser printers for the worldwide market, the LP1200 with FLASH ROM.

Fully HP LaserJet III™ compatible, the new LP1200 laser printer has 2Mb of RAM built-in and requires no additional RAM to print a full A4 page of graphics. Its fast, efficient processor and engine, together with straight paper path design, allows printing at a full 6 pages per minute. Unlike its competitors, this advanced laser engine enables the LP1200 to address a range of print resolutions up to 400dpi. A printer driver is scheduled for release in late April, to enable the Ricoh LP1200 to print at 400dpi from Windows 3.

Again, unlike the competition, the LP1200 includes a powerful document description language as standard. This language, 'LAYOUT', offers unique opportunities to develop custom-made printing systems. In particular, forms and document templates can be designed and stored electronically in the LP1200's unique FLASH ROM, alleviating the need for pre-printed forms!



UNIVERSAL FEEDER SHOWN NOT INCLUDED
REF: LAA 5238
RRP £135 +VAT

NEW! PCL5

FLASH ROM UPGRADABLE!

LASER PRINTER

400dpi 2Mb RAM 6PPM

FULLY HP LASERJET III™ COMPATIBLE

Silica Systems are pleased to introduce the revolutionary, new Ricoh LP1200. It has all of the specifications that you would expect to see in today's most technically advanced laser printer, plus a unique additional feature which places it far ahead of the competition - FLASH ROM. This 'Future Proof' technology protects the investment you make when you buy a Ricoh LP1200, as it enables you to keep up to date with new laser firmware developments. FLASH ROM is an area of memory inside the LP1200 which holds the printer's controller instruction firmware. If new firmware is developed, updated printer command languages etc, can be downloaded into this memory. Other manufacturers would require you to buy a new printer! Fonts, macros, additional emulations and graphics can also be stored in FLASH ROM, or on removable FLASH ROM IC cards. The new Ricoh LP1200 is the only laser printer to offer this FLASH ROM facility.

- **6 PAGES PER MINUTE**
- **PCL5 - SCALABLE FONTS**
- **FINE IMAGING ALGORITHM**
  Ricoh FIAL enhances resolution by varying both dot size and position, for high quality text and graphics
- **400dpi RESOLUTION**
  Default resolution - 300dpi. Will address 200, 240 and 400dpi.
- **2Mb RAM**
- **UNIQUE FLASH ROM**
  For controller software upgrade and storage
- **IC CARD SLOT**
  For programmable FLASH ROM cards
- **EXPANSION BOARD SLOT**
  For improved connectivity to additional systems eg. COAX/TWINAX, PC-LAN, FAX etc
- **LAYOUT**
  Document Description Language
- **1 YEAR ON-SITE WARRANTY**

Don't just take our word for it, see for yourself how the Ricoh LP1200 compares to the competition!

FEATURES	EPSON EPL4100	HP LASERJET IIIP	MANNESMAN TALLY MT904+	RICOH LP1200
Average Street Price (*expected)	£569	£699	£699*	£699
Official RRP	£945	£1,179	£1,099	£1,195
Maximum resolution in dots per inch	300x300	300x300	300x300	400x400
Windows 3 Driver @ 400 dpi (April)	-	-	-	YES
Print Speed	6ppm	4ppm	4ppm	6ppm
Straight Paper Path	YES	-	-	YES
PCL 5 Printer Command Language	-	YES	YES	YES
HP-GL/2 Vector Graphics included	-	YES	YES	YES
Resolution Improvement/Enhancement	YES	YES	YES	YES
Full A4/300 dpi graphics with standard RAM	-	-	-	YES
Warm Up Time	<45 secs	<60 secs	60 secs	45 secs
First Page of Text Output	<20 secs	<40 secs	34 secs	<15 secs
Page Description Language (PDL) included	-	-	-	YES
Flash ROM	-	-	-	YES
Upgradable Firmware	-	-	-	YES
IC Card Slot	YES	-	-	YES
Scalable Resident Fonts - in HP LJ III Emulation	-	8	8	8
Resident Bit-Mapped Fonts	11	14	14	14
AGFA Intellifont Scalable Font Technology	-	YES	-	YES
HP LaserJet III Emulation Included	-	YES	YES	YES
EPSON FX Emulation Included	YES	-	YES	YES
IBM ProPrinter Emulation Included	-	-	YES	YES
Standard Tray Capacity	100	70	100	100
Protective cover on standard tray	YES	-	YES	YES
Cost per copy*	1.65p	1.58p	1.67p	1.59p
Min-Max Paper Weight in gsm	60-157	60-105	60-120	60-157
Able to print on OHP Film	YES	YES	YES	YES
Able to print on card (157gsm - Manual Feed)	YES	-	-	YES
Auto Sensing on Parallel and Serial ports	YES	-	-	YES
Standby -Noise Level	<40dB	31.7dB	<35dB	<38dB
Printing -Noise Level	<50dB	43.3dB	<46dB	<48dB

*Based on full RRP @ 5% toner coverage E & OE

All Trademarks are acknowledged

SPECIAL PRICE WITH UNIVERSAL FEEDER (AS SHOWN ABOVE)

£799
+VAT=£938.83

NORMAL RRP OF FEEDER £135+VAT=£158.63

RICOH LP1200 (RRP £1,195) SILICA PRICE:

£699
+VAT=£821.33 Ref: LAS 5200

SILICA SYSTEMS OFFER YOU

- ***FREE OVERNIGHT DELIVERY:*** On all hardware orders shipped in the UK mainland.
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Before you decide when to buy your new laser printer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals or consumables, or help and advice. And, will the company you buy from contact you with details of new developments and products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for over 12 years and, with our unrivalled experience and expertise, we can now claim to meet our customers' requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest Free literature and begin to experience the "Silica Systems Service".

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Order Lines Open: Mon-Sat 9.00am-6.00pm No late Night Opening Fax No: 081-308 0608

LONDON SHOP: 52 Tottenham Court Road, London, W1P 0BA **Tel: 081-580 4000**
Opening Hours: Mon-Sat 9.30am-6.00pm No late Night Opening Fax No: 071-323 4737

LONDON SHOP: Selfridges (1st Floor), Oxford Street, London, W1A 1AB **Tel: 071-629 1234**
Opening Hours: Mon-Sat 9.30am-6.00pm Late Night: Thursday until 8pm Extension: 3914

SIDCUP SHOP: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX **Tel: 081-302 8811**
Opening Hours: Mon-Sat 9.00am-5.30pm Late Night: Friday until 7pm Fax No: 081-309 0017

To: Silica Systems, Dept AMCOM-0592-75, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND ME A RICOH LP1200 BROCHURE

Mr/Mrs/Miss/Ms: .... Initials: .... Surname: ....

Address: ....

.... Postcode ....

Tel (Home): .... Tel (Work): ....

Company Name (if applicable): ....

Which computer(s), if any, do you own? ....

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MEGA 31*

POWERPLAY

That's right you get the fantastic Amiga & **ALL THE EXTRAS** detailed in Harwoods "Mega 31*" Pack 1 AND you also get...

THE PHILIPS CM8833/II STEREO COLOUR MONITOR

MONITOR PACK

2

PACK TWO

OR...YOU CAN CHOOSE A PHILIPS MONITOR TV AT NO EXTRA COST! See page 6 for FULL details of this remarkable Fast Text Monitor TV

A SPECIAL PACK FROM HARWOOD'S YOU SEE AND HEAR THOSE GAMES WITH SUPERB CLARITY

Our monitor section on page 6 gives full details for your choice of Philips Monitors & Monitor TV's

BUY AN AMIGA WITH 2Mb FOR ONLY £40 EXTRA!!! (ie. 1Mb RAM Expansion included)

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MEGA 31*

POWERPLAY

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THE SUPERB PHILIPS CM8833/II STEREOCOLOUR MONITOR

Our monitor section on page 6 gives full details for your choice of Philips Monitors & Monitor TV's

MONITOR AND PRINTER PACK

3

PACK THREE

OR...YOU CAN CHOOSE A PHILIPS MONITOR TV AT NO EXTRA COST! See page 6 for FULL details of this remarkable Fast Text Monitor TV

Plus...

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Featuring... 185/40 cps, Full Colour 9 Pin NLQ Dot Matrix Printer with a FREE Dust Cover and cable to your Amiga. *(See printer panel for details)*

IF YOU WISH, REPLACE THE LC200 WITH A CITIZEN SWIFT 9 COLOUR AT NO EXTRA COST!!! OR... IF YOU PREFER A 24PIN COLOUR PRINTER, JUST CHOOSE FROM OUR RANGE & ADD THE DIFFERENCE IN PRICE BETWEEN STARS LC200 & 'YOUR CHOICE'. (eg. Citizen 224, add just £50)

£829.95 Including VAT

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CARTOON CLASSICS

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+

PHILIPS CM 8833/II STEREO COLOUR MONITOR
See Monitor Panel on Page 6 for Details

OR...YOU CAN CHOOSE A PHILIPS MONITOR TV AT NO EXTRA COST! See page 6 for FULL details of this remarkable Fast Text Monitor TV

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STAR LC200 9 PIN NLQ FULL COLOUR PRINTER
See Printer Panel on Page 5 for Details

BUY AN AMIGA WITH 2Mb FOR ONLY £40 EXTRA!!! (ie. 1Mb RAM Expansion included)

IF YOU WISH, REPLACE THE LC200 WITH A CITIZEN SWIFT 9 COLOUR AT NO EXTRA COST!!! OR... IF YOU PREFER A 24PIN COLOUR PRINTER, JUST CHOOSE FROM OUR RANGE & ADD THE DIFFERENCE IN PRICE BETWEEN STARS LC200 & 'YOUR CHOICE'. (eg. Citizen 224, add just £50)

+

A HOST OF BUSINESS SOFTWARE & ACCESSORIES...
PEN PAL V1.3 (Word Processor)...1Mb.
SUPERBASE II PERSONAL (Database)
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+

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Plus...

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- LEMMINGS
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- 10 BLANK 3.5" DISKS
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- MOUSE MAT
- 3 TAILORED DUST COVERS

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LESSON A

Get your children off to the right computing start with this software learn and play pack...

PROF. PLAYS A NEW GAME
PROF. LOOKS AT WORDS
PROF. MAKES SENTENCES
PROF. HUNTS FOR WORDS

Active, enquiring young minds love seeing the cartoon character called Prof. entertain and teach. Children take charge of Prof. on the computer, active learning. Follows National Curriculum(N.C.).

HOMEBASE

Ideal home storage system. Keep household lists, student records etc. Easy to use 'push button' controls.

PRIMARY MATHS COURSE

Around 24 modules in this course from 3 yrs old right up to secondary level. Follows N.C.

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24 module course. Teaching from the computer and books. For early starters & the dyslexic.

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A GREAT EDUCTIONAL PACK FOR YOUR CHILDREN AT A FRACTION OF THE NORMAL COST

£89.95 Including VAT

HARWOODS LEARN & PLAY

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LESSON B

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A fantastic word processor with all the tools you'll need to create effective written work. Ideal for home work, projects etc. or for the families letters. Text wraps automatically around graphics, even as you type! Includes a built-in database and Forms Manager.

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All our packs contain the new Amiga A500 Plus. (1.3 Amigas may still be available to special order, please enquire.)

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Access

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*Finance terms are available (subject to status) for most products: please see our ordering panel at the end of this advert for full details

SOUND AND VISION

Words and Pictures

CDTV



IMAGINE, IF YOU CAN, THE CONCEPT OF A NEW, MORE POWERFUL AMIGA...

...WITH 1 MEGABYTE OF MEMORY, AND A COMPACT DISK DRIVE OF ALMOST INFINITE SIZE. A DISK DRIVE SO VAST, IT CAN STORE HUNDREDS OF MILLIONS OF DIGITS OF DATA. THIS DATA COULD BE, SPEECH, ANIMATED PICTURES, DIGITISED STEREO SOUND, COMPUTER IMAGES OR WHOLE ENCYCLOPAEDIAS.... AND MORE.

IMAGINE THIS, AND YOU CAN START TO GRASP THE CONCEPT OF CDTV.

THE INTEGRAL COMPACT DISK DRIVE, IS THE KEY TO THE POWER OF CDTV. ITS STORAGE CAPACITY IS EQUIVALENT TO AROUND A QUARTER OF A MILLION FULL PAGES OF TEXT. THIS WHEN INTEGRATED WITH THE 1 MB OF INTERNAL AMIGA CIRCUITRY, CREATES A SYSTEM, WHICH FROM A CD DISK, CAN GIVE YOU ACCESS TO AN UNIMAGINABLE SPECTRUM OF REAL WORLD IMAGES, NEVER SEEN COMBINED BEFORE. THESE VIVID IMAGES, WITH WORDS AND SOUNDS, GIVE YOU A WHOLE NEW DIMENSION IN HOME EDUCATION, ENTERTAINMENT & INFORMATION TECHNOLOGY. AND... DON'T FORGET, THAT CDTV CAN PLAY IN SUPERB QUALITY, ANY NORMAL AUDIO MUSIC CD, AND IT CAN ALSO PLAY THE NEW CD+G DISKS, WHICH GIVE DIGITAL SOUND AND ON SCREEN GRAPHICS. ON CD DISKS NOW AVAILABLE, THERE ARE EDUCATIONAL PACKAGES, ENCYCLOPAEDIAS PACKED WITH REFERENCE INFORMATION, STUNNING GAMES, MUSIC SYSTEMS AND MANY OTHER NEW AND VARIED SUBJECTS, INCLUDING WHOLE WORLD ATLASES OR EVEN THE COMPLETE WORKS OF SHAKESPEARE, EACH ON ONE CD DISK!!! **CDTV - NOTHING LESS THAN REVOLUTIONARY**

FREE CDTV STARTER PACK!!!

WHEN YOU CHOOSE YOUR CDTV FROM GORDON HARWOOD, NOT ONLY DO YOU GET OUR LEGENDARY SERVICE, BUT WE GIVE YOU A CDTV STARTER PACK, TO GET YOU EXPLORING YOUR NEW WORLD - STRAIGHTAWAY. THIS INCLUDES A SUPERB SELECTION OF CD DISK TITLES INCLUDING THE WELCOME TUTORIAL & HUTCHINSONS ENCYCLOPAEDIA, PLUS ... FOUR GAMES, SHERLOCK HOLMES & THE HOUND OF THE BASKERVILLES, SIM CITY, CHAOS IN ANDROMEDA, AND THE ACCLAIMED LEMMINGS, WORTH IN TOTAL ALMOST £170.00. IN ADDITION IS THE INFRARED REMOTE CONTROLLER, AND ALL THE HARDWARE NEEDED TO GET YOU CONNECTED.

ALL THIS FOR JUST £499.95

CDTV IS THE SAME SIZE AND STYLE AS MOST VIDEO RECORDERS, SO IT CAN SIT UNOBTRUSIVELY ABOVE OR BELOW YOUR HOME TV AND/OR HI-FI. AND WITH ITS INFRARED REMOTE CONTROLLER, IT CAN BE OPERATED FROM YOUR ARMCHAIR. BUT PERHAPS MOST IMPORTANTLY, IF YOU ARE A COMPUTER ENTHUSIAST, REMEMBER THAT INSIDE EVERY CDTV, IS AN AMIGA, JUST WAITING TO BE USED. SO LATER ON, YOU'LL BE ABLE TO BUY THE OPTIONAL KEYBOARD AND DISK DRIVE, TO GET INTO THE WORLD OF AMIGA COMPUTING. PRINTERS, DIGITISERS, GENLOCKS AND OTHER ACCESSORIES,CAN ALL BE CONNECTED TO GIVE ACCESS TO MANY OTHER EXCITING FACILITIES, AND ALSO MANY OF THE EXISTING SOFTWARE PACKAGES AVAILABLE FOR THE AMIGA COMPUTER. NEVER BEFORE HAS THERE BEEN SO MUCH POTENTIAL FROM ONE NEW STUNNING SYSTEM, PACKED WITH **TODAYS TECHNOLOGY.!**

CALL IN AND SEE US FOR YOUR PERSONAL DEMONSTRATION, OR PHONE US FOR YOUR FREE DETAILED CDTV INFORMATION PACK.

CDTV ACCESSORIES

Please call for latest availability.

CD 1220 KEYBOARD	AN 89 KEY QWERTY KEYBOARD	£49.95
CD 1252 MOUSE	INFRARED MOUSE WITH BATTERY SAVER.	£49.95
CD 1200 TRACKBALL	INFRARED TRACKBALL, WITH THE OPTION OF DIRECT CONNECTION TO EXTEND BATTERY LIFE. DUPLICATES FUNCTIONS OF 2 BUTTON MOUSE & INCLUDES TWO 9 PIN PORTS FOR STD. JOYSTICKS	£79.95
CD 1400 CADDY	FOR HOLDING CD WITHIN DRIVE	£9.95
CD 1401 MEMORY CARD	PERSONAL RAM CARD CONTAINING 64K OF MEMORY FOR STORING DATA OR AS A BOOKMARK FACILITY WITHIN CDTV	£79.95
CD 1405 MEMORY CARD	A LARGER PERSONAL RAM CARD CONTAINING 512K OF MEMORY FOR STORING DATA OR AS A BOOKMARK FACILITY WITHIN CDTV	£249.95
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CD 1301 GENLOCK	PAL BASED VIDEO INTERFACE CARD FOR SUPERIMPOSING CDTV IMAGES OVER A VIDEO SIGNAL PROVIDED BY ANY STANDARD VIDEO SOURCE	£149.95
CUMANA 3.5" DRIVE	CDTV COMPATIBLE AND STYLED IN MATCHING BLACK. (Same spec as CAX 354 on page 4 of this advertisement)	

Many Amiga Accessories & Peripherals (e.g. Printers, Disk Drives, Software etc.) are compatible with CDTV. Please phone us for compatability information.

HARWOODS AMIGA PRO-GEN

NEW LOWER PRICE



PROFESSIONAL QUALITY GENLOCK FOR COMPUTER AND VIDEO MIXING, AT A DOWN TO EARTH PRICE!!!

Please note the above photograph shows Spectracolor which has now been replaced by Photon Paint 2.0

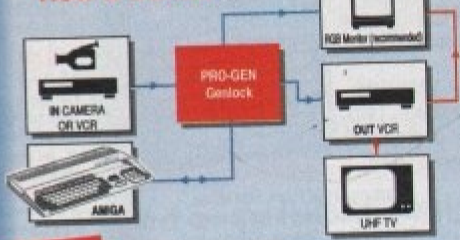
PRO-GEN Amiga Genlock

The Pro-gen AMIGA Genlock allows you to mix your Amiga display with any PAL video signal whether it is from a VCR, Laserdisk player or a Camcorder. In fact any item of video equipment which outputs a PAL composite video signal.Combined with the Amiga computer the Pro-Gen gives you the facilities of a special effects & video titling suite. Take your own films & give them a professional look by OVERLAYING TITLES or by SUPER IMPOSING YOUR OWN GRAPHICS created in packages like Photon Paint 2.0 or Deluxe Paint. Pro-Gen is supplied with micro illusions superb Photon Paint 2.0 package.

FREE

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How it works:



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PRO-GEN... NOW INCLUDES A VERY VERSATILE MULTI COMPONENT VIDEO TO GENLOCK CONNECTING CABLE KIT. THIS ALLOWS PRO-GEN TO BE USED STRAIGHTAWAY WITH MOST POPULAR VIDEO EQUIPMENT, WITHOUT THE NEED TO HUNT DOWN THE CORRECT CONNECTING CABLES. THIS KIT CAN ALSO BE USED TO CONNECT IN OTHER WAYS... eg. VCR TO VCR etc.
A KIT TO START YOU OFF RIGHT FROM THE MOMENT YOU OPEN THE BOX!!!

NEW LOWER PRICE

PRO-GEN with Photon Paint 2.0 ONLY £99.95

Mode Switch-box for Genlocks

Features Include
- Compatible With The Pro-Gen And Rendale 8802
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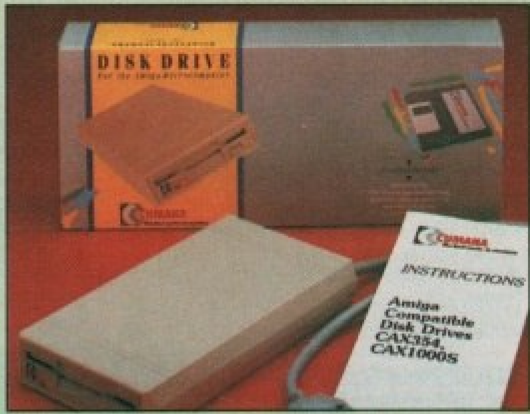
£29.95

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- Throughport
- Access Light
- Compatible with Amiga 500/1000/1500/2000/3000 and CDTV

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NOW SUPPLIED WITH A FREE 3.5" DISK HEAD CLEANER for optimum reliability

BLACK CDTV COMPATIBLE VERSION AVAILABLE NOW!!!

NEW! GVP 52-105Mb HARD DISK DRIVE WITH MEMORY EXPANSIONS OF UP TO 8Mb.

- Capacities of 52 or 105Mb available
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- Autoboots with Kickstart 1.3/2.0, boot enable/disable switch
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CITIZEN 124	BLACK ONLY	£4.95	£24.95	N/A	N/A
CITIZEN SWIFT 9	BLACK/COLOUR	£4.95	£24.95	£16.95	£99.95
SWIFT 24/24E/224	BLACK/COLOUR	£4.95	£24.95	£16.95	£99.95
STAR LC10/20	BLACK/COLOUR	£4.95	£24.95	£6.90	£36.50
STAR LC200	BLACK/COLOUR	£6.95 ZX9	£36.95 ZX9	£12.95 ZX9CL	£69.95 ZX9CL
STAR LC24/200	BLACK/COLOUR	£8.95 Z24	£49.95 Z24	£14.95 X24CL	£74.95 X24CL
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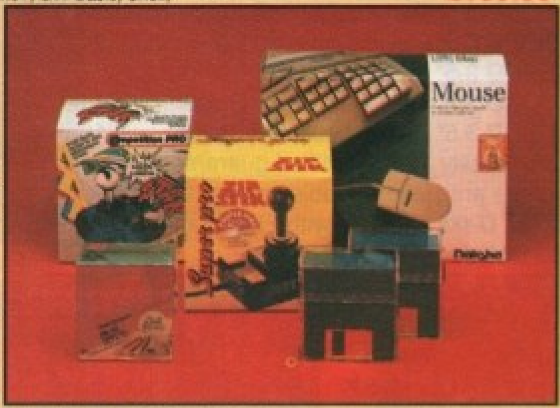
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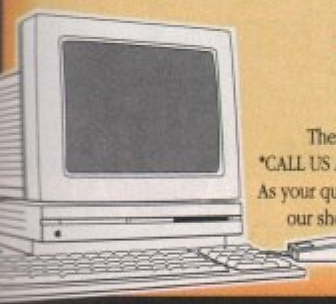
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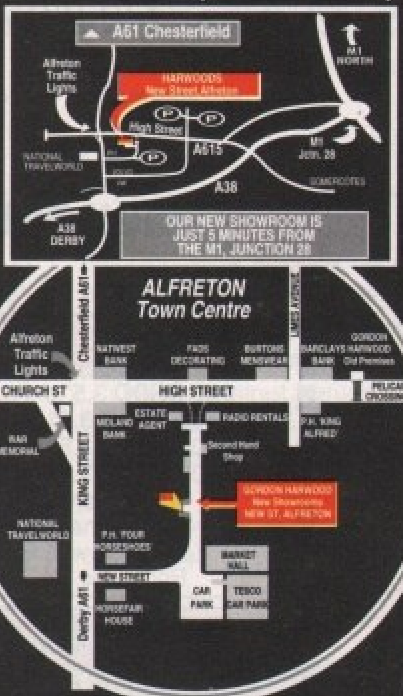
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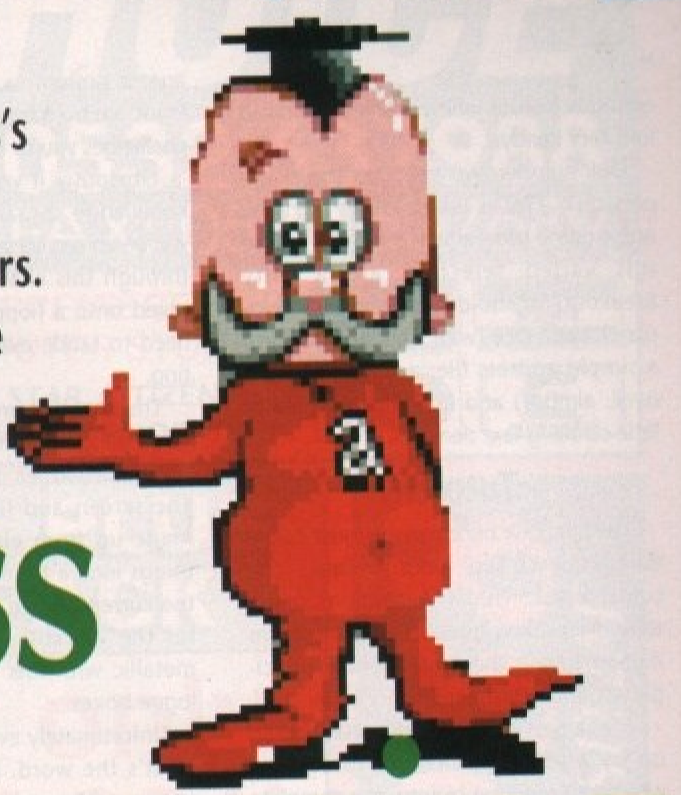


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Painless programming

Easy Amos offers many of Amos's powerful features while remaining accessible to beginners. Kyle Rees peruses the package



Europress software, creators of the original Amos, have taken a long look at the package's good points and produced a version specifically aimed at people just starting out in programming.

Before you can enter into the exciting and glamorous world of the computer professionals, the two disks which come in the package must be installed onto four (count 'em!) separate disks. These disks are not supplied. If you are lucky enough to own a hard drive, you can install it there.

Installation

You get a funny feeling that this package is something special when you first load the installation program – it asks you for your name! After you enter it, Easy Amos will create a unique special registration number for you.

I must congratulate Francois Lionet (the program's creator) for producing one of the most painless installers in the world – it's now as simple to install on a hard drive as it is on a floppy disk.

Just what do you get for your money in software terms? Well, the installation process creates three disks – the fourth blank disk is required to store the programs which you will undoubtedly create while working your way through the hefty 400-page manual.

The first disk is where Easy Amos and its associated accessories are stored. If you are familiar with the older Amos you may be interested to know that these programs are far superior to any that appeared on that package.

The accessories are useful utilities which allow you to simplify the boring and complicating jobs which usually make up the bulk of computer programming, leaving you to get on with the exciting creative bits.

The first accessory is the Sample Bank Maker. This will take any number of standard Amiga sound samples and combine them into one large file. This makes replaying and manipulating them very simple, especially with the demonstrations in the manual.

Accessory number two is the Bob Editor. A Bob is an animated object that can move around the screen. They're used in games to create players, aliens, spaceships, in fact anything! This program is quite large but has to be seen to be believed – it includes everything an artist could want.

Not only does it have most of the drawing tools found in many popular art packages (such as Deluxe Paint), the program also allows you to import Bobs by grabbing parts of standard Amiga screens. There is even a rudimentary animation facility. The third accessory lets you take a standard Amiga screen, created with a program like Deluxe Paint, and compact it down to an incredibly small size. For all you technical bods out there you can have a picture which takes up 32k in memory reduced down to 6k or even less.

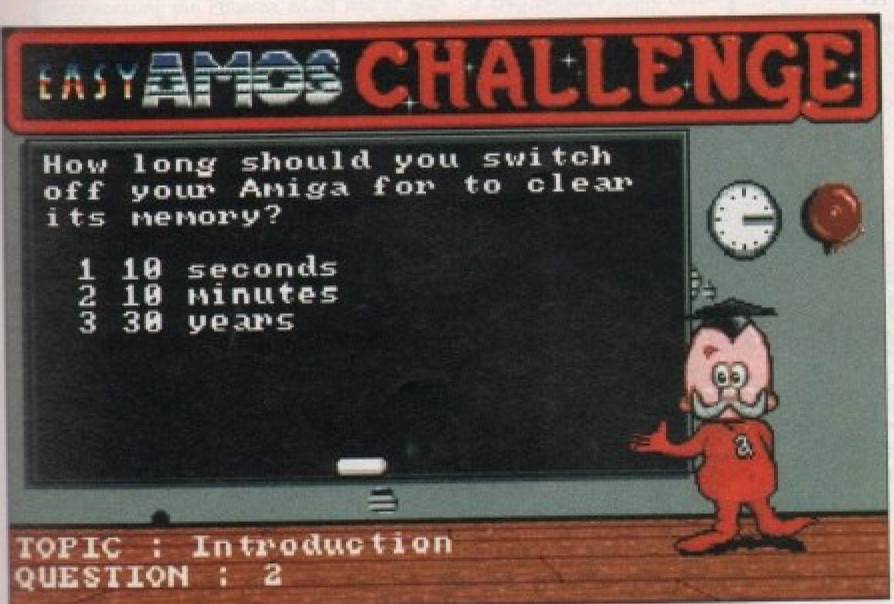
Finally, the fourth accessory is mind-blowing. It is a fully functional disk utility in a similar mould to CLIMATE, SID and many others. These, and other similar programs, allow you to look at all the files on your disks, as well as providing you with facilities to format disks, copy, print and examine files and so on.

One of the nicest features of this program is that if you examine a Bob, a picture or music file, or a sound sample, you can actually see or play it.

All of these utilities can be launched with a single keypress from the program ➤



Easy AMOS's direcrory utility makes life...er...easy



One of the many example programs supplied with the package



The sample bank creator takes the effort out of sound

editor, a feature which many people will find very handy.

Disk number two becomes the examples disk. This is where all of the Easy Amos demo programs are stored. Among this varied selection are a nifty Breakout/Arkanoid type game, a two-player cycle race (with parallax scrolling), a simple address file, a Kick Off clone (well, almost!) and finally a rather natty little scrolling text demo.

Tutorial

The final disk becomes the most essential part of the Easy Amos package – the tutorial disk. This disk contains many things, including a selection of programs demonstrating the programming principles explored in the manual.

The largest portion of the disk is taken up by a series of example programs which slot together to form the complete football game which I mentioned earlier.

The excellent manual together with these highly commented-upon examples take you from the program's conception through to completion. If you have not started to understand some of the principles behind computer programming once you have studied this part, get worried!

A challenge game is also squeezed onto this disk. As Easy Amos is advertised as teaching the beginner to program, this game forms the core of the whole package. It presents a selection of questions from each chapter in the manual and challenges you to answer them.

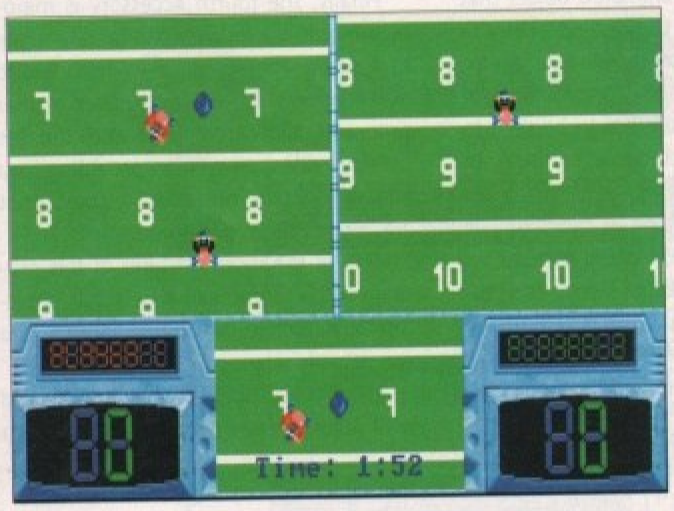
Obviously if you have absorbed the knowledge contained in this book you will be able to work successfully to work your way through this challenge. Results can be saved onto a floppy disk so there is no need to tackle every chapter in one sitting.

The environment in which you create your programs has changed a little since the earlier incarnation of Amos. The screen and file selectors are now made up from eight colours, making things look a bit more interesting. As is the current vogue, Europress have gone for the Workbench 2.xx look, sort of metallic with lots of relief on the dialogue boxes.

Unfortunately everything is a bit, errr what's the word, blue! Yes the whole screen is blue, not my favourite colour. You can change the screen setup with a click on the menu, but the built-in colour selections look as though they have been put together by a colour-blind designer. Yuk!

So how about the manual? This, after all, was probably the most criticised point of the original Amos package, which contained an excellent reference manual but didn't give any help or advice to the beginner.

Well you will be pleased to know that Mel Croucher, a funny man known for his love of strange, big-nosed characters, has written a gigantic tutorial manual. In fact, to call it a manual is a bit of an insult – it is a book, aimed at the very beginner. It starts by assuming you know very little about your Amiga and advances from there.



Kick Off 2 with tricycles? Easy Amos includes a couple of example games

Discount on Easy Amos

If you are one of those people who found Amos a little difficult to come to terms with, you will be pleased to know that you can purchase Easy Amos at a substantial discount.

Send back your Amos Programs disk, plus a cheque or postal order payable to Europress Software, to Easy Amos offer, Customer Services, Europress Software Ltd, Europa House, Adlington Park, Macclesfield SK10 4NP.

The are 20 chapters to this book. As you work your way through this special script you will notice that it doesn't just teach you about programming your Amiga, it also includes strange quotes from sources as diverse as Groucho Marx and the Bible. Each quote is relevant (in a rather offbeat way) to the section in which it is placed. This is certainly a welcome relief from the usual tedium of some so-called computer "tutorial" books.

Towards the end of the manual, advanced topics such as the new Amos Tutor are covered. The Amos Tutor is a complete debugger for your programs. It allows you to step through each section of your mega-hit, list variables – in fact do just about anything, and all while the program is running in the background.

Great depth

Each chapter covers its own topic in great depth, providing diagrams and sample listings aimed at easing you through the lesson at hand.

There are a couple of down points though. The first is in the LOGIC chapter. Without going into my entire life story, I have learnt that structured programming is here to stay – an A-Level in Computer Science and many jobs have taught me this.

The LOGIC chapter has a rather large section devoted to the antiquated "GOTO" command, much more than the "GOSUB" or the "PROCEDURE" portions. I would hate to see an entire generation of computer programmers grow up believing GOTOs are a part of life – they aren't! Fortunately you can just ignore this page and explore the more sensible structuring commands.

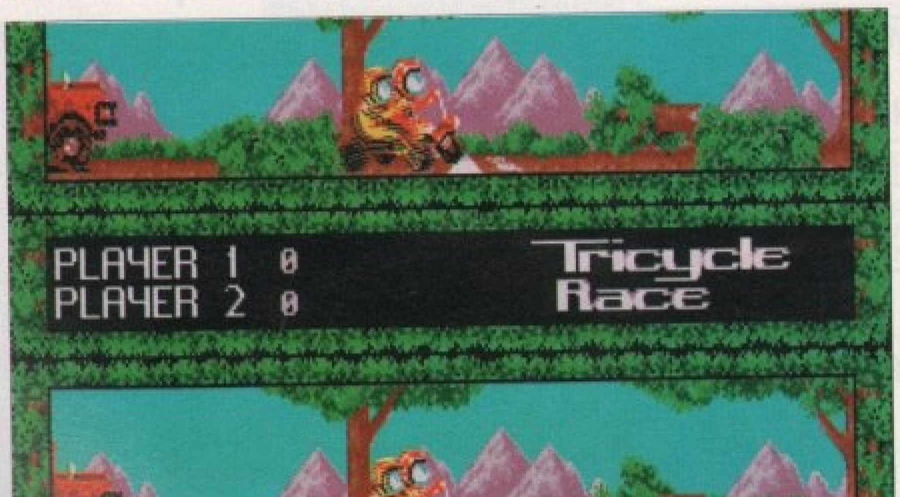
The chapter devoted to MATHS is rather small. I know you can gain a lot of information about computer maths from some nice text books but I would like to have seen more lengthy explanations and sample programs for the trigonometry bit.

Humorous

Those points aside, this really is the best programming book I have read for years. Not since the early 80s when old Sir Clive Sinclair produced that little ZX81 beastie has programming seemed so easy. At its best the manual is an amazing in-depth tutorial; at its worst it is a friendly and humorous reference guide, which can't be a bad thing at all!

When you have become a programmer capable of fantastic feats with Easy Amos, you can increase your knowledge and skill by upgrading to the package's big brother, Amos. Amos incorporates many advanced features not found in Easy Amos, such as a complete 3D graphics extension. The upgrade costs £19.99, against a retail price of £49.99.

This is a unique and friendly product. Suffice to say that if you want to learn how to program, this is for you. By the time you have worked your way through the entire package you should be able to produce some great programs. Go out and buy it now!



More tricycles as Easy Amos uses animated sprites to show the basics of game design



The Bob editor has a wide array of painting tools and can aid in the creation of great Bobs

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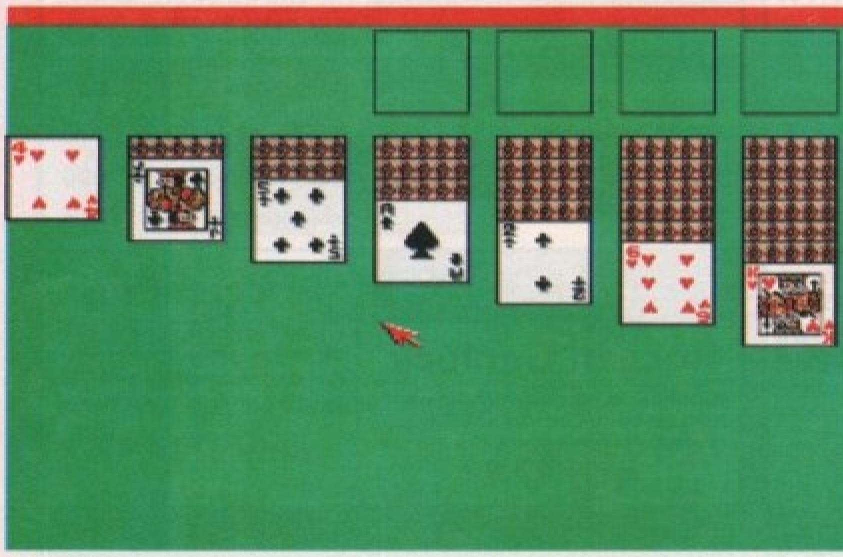
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THE D

Games of Chance

Lose yourself in your six favourite card games with Martin Wilson's excellent compendium



The Card Games program is actually six games in one tight little bundle of fun. Classic favourites include Klondike, Golf and Pyramid, so you should find enough here to provide hours of entertainment.

Unlike many card game programs, Martin's faithfully reproduces the picture cards, so your Kings, Queens and Jacks appear as they should. This not only makes the program more attractive to look at, it also makes scanning a Klondike deck for possible moves a lot easier, as the picture cards can be spotted with ease. To select a card in any of the games, click once on it and it will start to flash. To move it, just click on the destination. If the move is illegal, the screen will flash and you'll have to try placing the card somewhere else.

GFXConverter

Author: Desmond King

GFXConverter is a program for converting to and from IFF and Raw graphic formats, with a few hidden extra features up its sleeve. Unlike many IFF-to-Raw converters, with their difficult to use CLI interfaces and simple conversion-only approach, GFXConverter will enable the user to save sprites, bobs, and copper lists.The program handles all Amiga screen modes, including EHB and HAM, can handle images up to 1,024 x 1,024, and, saves Bobs as source or binary code with masks thrown in to the bargain. All this from a friendly, menu-driven interface! Programmers who insist on boring, difficult to use programs will ignore GFXConverter, but they should be in a minority. For technical details and full instructions on how to use the program, see Desmond's doc file on the CoverDisk.

LastHope

Author: Manuel Lemos

We've had DiskSalv, TrackSalv, and Finally FixDisk 1.2 on the CoverDisk over the past few years. Now comes LastHope, the latest in file retrieval programs. LastHope is designed to look for very lost files, including those with damaged or missing headers, and save them from oblivion. It only works with the standard filing system at the moment, so will only work with floppies. Hard drive users will have to stick to FixDisk until Manuel updates the program. To use LastHope, just run the program, insert the disk from which you want to salvage files in the drive, then tell the program to start scanning. A picture of your disk's contents will build up, sector by sector, with damaged files shown in red, and when the scan is over you'll be asked which files, if any, you want to save out to another disk.

Please remember that this is a shareware program, and should be supported as such. You'll find details on how to register as a shareware user in Manuel's on-disk documentation.

ProgHelp

Author: Neil Culver

ProgHelp is designed for all those programmers out there who use a variety of text editors, debuggers and assemblers from different, usually shareware, sources. It offers the chance to integrate the programming process under one front end program, making it easier to skip from assembler to debugger and so on without all that CLI faffing about.

Print Spooler

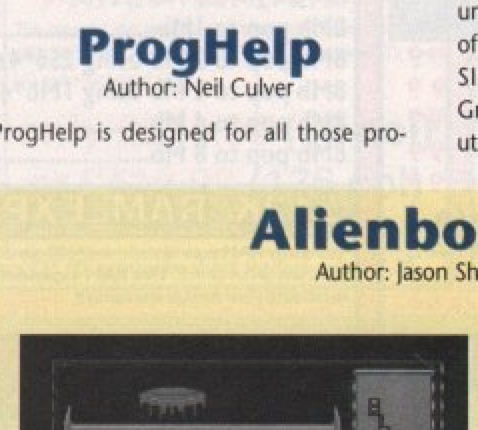
Author: Daniel Barrans

Print Spooler consists of an AmigaDOS device handler to replace the PRT device, a couple of simple CLI commands, and a mountlist entry.

To set it up on your system disk, follow the instructions in the on-disk documentation. You'll have to do a fair bit of copying and so on, but if you use SID, TDM (such as supplied on the GraphicStation), or another directory utility this shouldn't be too painful.

Alienbounce

Author: Jason Shallcrass



Bouncing aliens, a seemingly impregnable mothership, and only a feeble little laser to defend yourself! Yup, it's another alien shoot-'em-up, and a very playable one too.

The game opens with fairly easy-peasy aliens, who die after being hit twice and don't move too fast. As you progress in levels, however, the pace quickens and more aliens appear with each attack wave.

...DISKS...



2 Superbase Special

The *AC* guided tour to our amazing Superbase Personal giveaway...

Thanks to *AC* and your discerning taste you're now the proud owner of Superbase Professional, one of the Amiga's premier databases. It's a program that not only provides access to a fully functional relational database, but also gives you the option to include a limitless number of records and instantly display related graphics at the touch of a button.

Continued Support

In next month's *AC* we'll continue to support Superbase with the first in a number of support articles that will help the novice user master the basics of this excellent program.

As well as *AC*'s continuing support Oxxi, the owners of Superbase Personal will, in conjunction with *AC*, be offering a series of amazing upgrades to both later versions of the Superbase range as well as manuals and upgrades for Superbase Personal itself.

All, of course, aimed at any reader who wants to exploit this excellent program to the full.

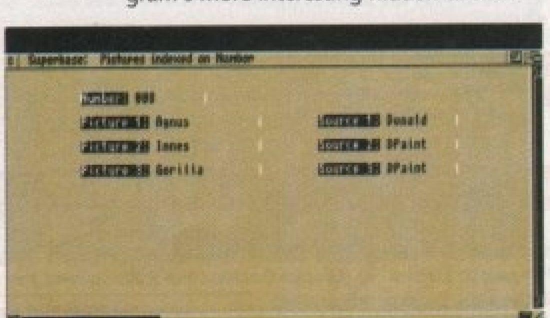
To get you off the mark we'll start with a brief guide to the program and how to create your first designer database. If we assume you've booted the program you'll be greeted by the copyright notice and a prompt in the menu bar informing you that the program is empty. As a result, the first job is to load a file from disk.

To do this, simply click the right mouse button and move to the Project menu which you'll find on the far left of the menu bar. Once active, the pull-down will appear with some items active and others ghosted – this is simply because the program requires data to activate all its options.

Select Open/File and a requester will appear showing all the available files on the disk. With the mouse select the address file and click OK.

Now the database actually contains some data we can start the tutorial proper. Perhaps the most striking aspect of the program has to be the tape deck controls which combine to make Personal and indeed the entire Superbase range one of the friendliest database formats available.

Have a look at the box for a description of each control. In some cases the effect is rather self explanatory, but with others you'll discover some of the program's more interesting hidden talents.



Bringing images into the action – one click of a button and your art work comes flying into the action

To start you off this month we'll go through the creation of a simple database which when complete will form a basic phone book complete with name, address, number, comment and date fields.

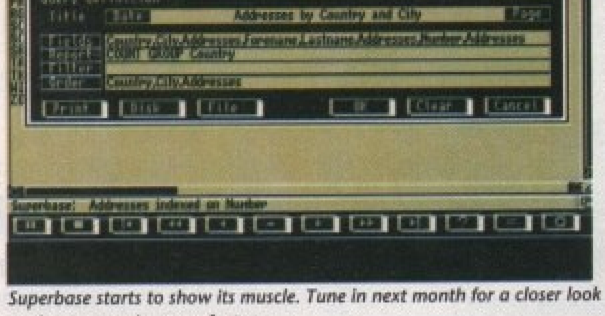
The first job is to close the current database via the project menu. Once clear select New from the same menu and a prompt will appear asking you to name the new file. For our example type Names&Numbers, followed by OK.

New Requester

At this point a totally new requester appears into which we'll add all the relevant definitions for each field in the new file. First click on text – this again produces a fresh requester giving you the chance to define the number of characters in the string. Reduce the figure to 15 using the arrow icons and click on OK.

Now click in the Field box and type Firstname. Click on ADD and your first field will be defined. If at any point you make a mistake or perhaps wish to alter part of the definition, simply click on the field in question within the main requester window and it will automatically be selected for editing.

To create the next field, click on Clear to remove the old definition and follow the same procedure again by clicking on text defining the string length, but this time make it 20. Type the word Lastname into the field window, finally adding the new field to the list. Next comes the phone number itself. Again, click on Clear and then select Text, adding the value of your choice. Type in the word Number but also click on the Req icon with this option active. Superbase Professional will insist on a number from the user – after all, a phone book isn't



Superbase starts to show its muscle. Tune in next month for a closer look at the program's power features...

FREE!

with next month's magazine- an informative user's guide to the essential Superbase Personal functions!

In our special cover-mounted freebie, a whole range of the program's powerful features will be explained and demystified, with handy hints and tips on how to get the best from the most useful free gift any Amiga magazine has ever brought its readers.



much use without a number. Finally select add once more. Now follow the same procedure as above using the word Comment for the field name, while leaving the required icon inactive. We suggest a text string of about 50 characters – usually enough for a fax or alternate phone number plus a few brief reminders.

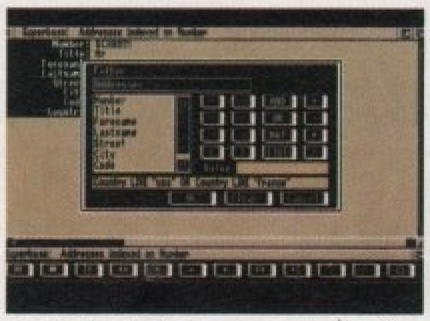
The final field holds the date. This is a useful addition as you can use it to keep track of your calls by editing each record as you use it to record when a conversation occurred, or perhaps as a marker for subsequent calls.

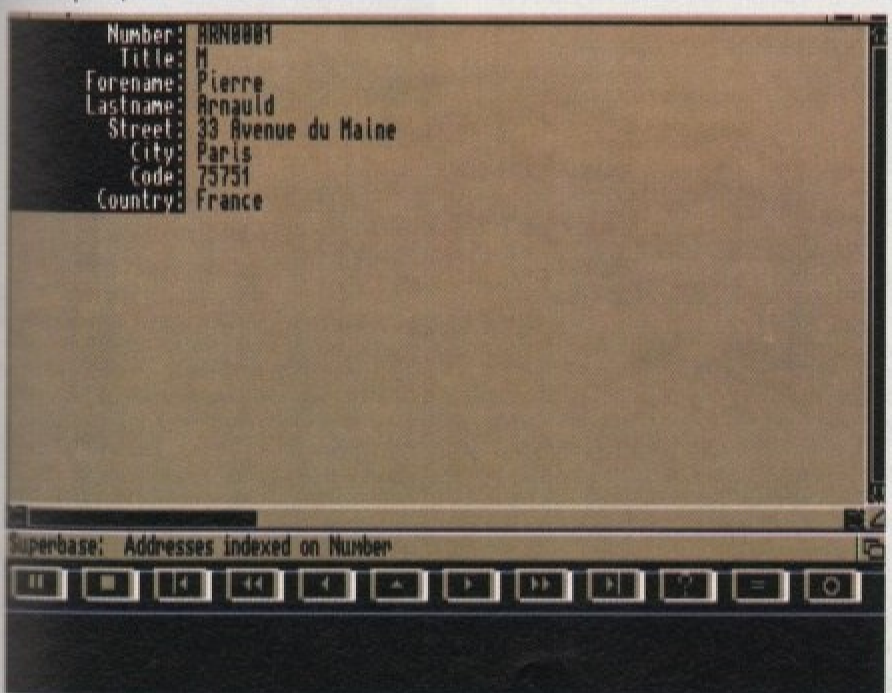
Again, click on Clear to empty the last set of definitions, but this time only activate the date icon. This again produces its own requester which allows you to define how the dates within each record will appear onscreen.

For your first adventure in information technology, simply select OK as the default setup. Finally type Date into the field window followed by Add to complete the definition. Now your definition is complete, check that all the fields are correct and then click on OK to continue. At this point yet another requester appears prompting you to add the indexes you require. To do this simply click on the Firstname followed by OK then repeat the process with Secondname. Finally, click on OK to complete the process.

At this point you'll be returned to the Superbase Personal main screen. To fill the new file select New from the record pull-down menu and the new template for the Names&Numbers file will appear. All you need now is a few friends – not included – to add to your database, and you're in business.

After you've added the new data to each record, select Save from the record menu and all the relevant information will be captured for posterity in your own designer database. Feel free to experiment but if you're going to attempt some serious tinkering make a backup of the original disk – it will be used as the basis for subsequent tutorials as it stands.


Sorting through files the easy way thanks to the friendly face and power of the filter command



The address file loaded and ready to rock...

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Tape deck controls

First on the list is the Pause icon which will freeze the database as it scrolls through your data thanks to the fast forward and rewind icons.

Next comes the Stop icon which does exactly as the name suggests and halts the program's high speed search functions,

Third and ninth are the Move to Beginning/Move to End icons which instantly leap through the data list to either the beginning or end of the data file.

Fourth and eighth are again rather self explanatory and simple scroll through the data file at high speed until either the end of file is reached or the pause or stop icons are activated.

The fifth and seventh icons simply advance or retard through the database in increments of one.

The Up arrow is slightly less obvious and is used to restore the display after certain program functions are complete.

Occasionally functions terminate displaying associated data, and as a result this icon is used to update the display with the currently selected record.

The final three icons are potentially much more powerful than the rest. The first activates the key record function which allows you to search the currently selected index for a matching string or numerical sequence.

Index refers to the field within a record which Superbase uses to list the records in a file. So for example, if the records within a file were indexed my lastname, the files would appear in descending order from a to z – Austin, Brown, Cartwright, and so on.

Touch Button Filters

To use the Record key function you must ensure that the database is first indexed on the correct field and then simply type in the match you require. The program will then search that particular field in every record and if a match exists it will return displaying the complete record associated with that particular field.

As you've probably guessed, field refers to the individually elements within each record – Forename, Lastname, Address and so on.

The next icon hides perhaps the most powerful function of all the tape deck controls. Clicking here reveals the Filter Requester which when mastered can filter through an entire database, selecting and displaying only the exact data you require.

Assuming you still have the Address file loaded, click on the filter icon and then click on the word Country in the left window. Now click on the Like icon on the right of the requester.

Type *usa* into the value box and hit return. Now click on the OR icon then the word Country once again. Reselect the value box and type *france*. Click on OK. The program will now automatically filter out all records that suit your requirements.

The Like command means that you don't require a perfect grammatical match, while the OR option gives you the change to expand your horizons to include as many countries as you like. Isn't technology wonderful? The final icon depicts a camera.

If you click on this icon while editing a file containing graphics, the program will execute that particular record's external search path and attempt to load and display the particular graphic associated with the record in question.

If you try to use this option with the Address database currently loaded the program will return the message "no external file field defined". In other words the Address file doesn't contain graphics.

As with the Filter option, this particular function is going to be explained fully in a later issue. Nevertheless, if you want to see the function in action straight away simply go to the Project pull-down window and select Close/File.

Another requester will appear prompting you for a file name to save under. Simply click on address to reselect the original name followed by OK. Now Superbase is empty once more and ready to accept another file from disk.

Now follow the same loading procedure as before but this time select the Picture file from the load file requester. Once loaded you can move around the database as before, but you'll also have the added bonus of being able to see the file's associated pictures onscreen.

Simply select the record you want to examine and click on the camera icon – the image will be automatically loaded from disk. To spot the display process, select Close from the first pull-down menu.

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AMIGA Update

The Amiga software market is as buoyant as ever. Paul Austin brings you all the revisions and revamps – first!

Alternative 3D textures

In a break from tradition, the prolific Alternative Image are about to launch their second internal release, The Alternative 3D Textures. This is a selection of 18- and 24-bit backgrounds created by Alternative's very own Henri Bujko – originally for use within the company's commercial exploits.

The collection isn't solely secondhand, as several original textures have been added to sweeten the already tempting pot. Having said that, the majority are 18-bit creations – scanned in-house – and edited to produce high quality backdrops aimed primarily at the ray tracing and 24-bit paint community.

Along with the 18-bit images come a selection of 24-bit creations which Alternative farmed out for scanning and subsequent inclusion in the collection. Although the prospect of employing 18 – as opposed to 24-bit may cause concern among the purists, the contrast between the two is negligible – it only really becoming apparent when applied to extremely large images.

As well as 18- and 24-bit colour images, the collection is also available as eight-colour Scala-style backdrops, colour greyscales for bump and altitude mapping within Real 3D and Imagine plus good, old-fashioned Ham for the financial mortals among use. As a result, pros and amateurs alike have an equal opportunity to get in on the act.

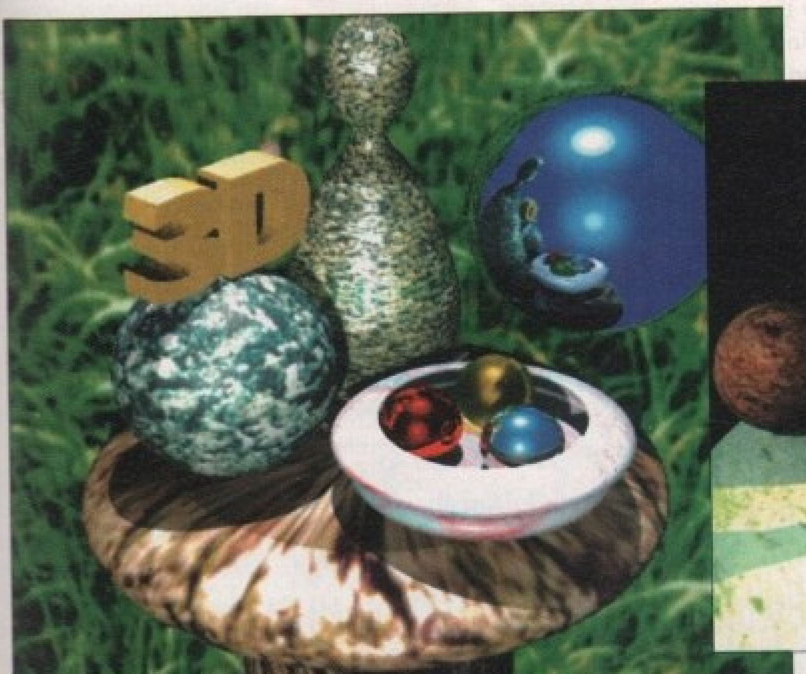
The 18- and 24-bit options come in two volumes with approximately 14 disks to each. The average file runs to about 750k – as a result it doesn't take a genius to work out that you'll be looking at, on average, an image a disk. Each of the two 24-bit volumes cost £50 a time – which I must admit seems a little pricey. Nevertheless, the results speak for themselves, so it's perhaps a classic case of "you get what you pay for".

Having had my little moan, it's worth stressing that the Alternative collection – even at £50 per volume – is still a fair price in comparison to other 24-bit texture collections.

If you're a more traditional artist – in other words skint – there's perhaps a more attractive offer in the form of Alternative's Ham examples which are made up of between 30 and 40 texture files for a mere £30.

The 18–bit, 24-bit and Ham collections all come with a selection of Henri's favourite Real 3D animation files to get you started, which among other things reveal a few tricks of the trade. The most interesting addition is a file which sets up an environment containing the notoriously tricky water effect.

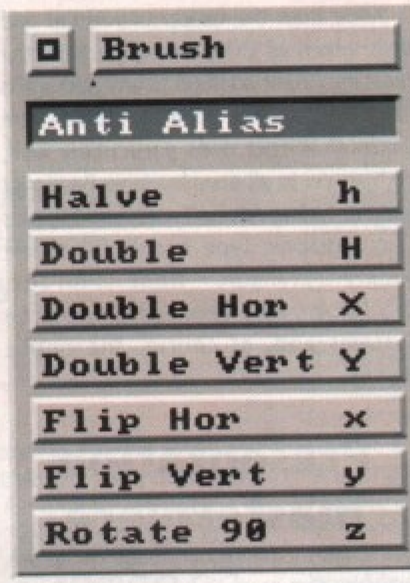
For more details contact Alternative Image on 0533 440041 or fax them on 0533 440650.



24-bit beauty at the bottom of the garden



Stunning 24-bit backgrounds in the hands of a sick mind. Henri Bujko at his best – is there a psychiatrist in the house?

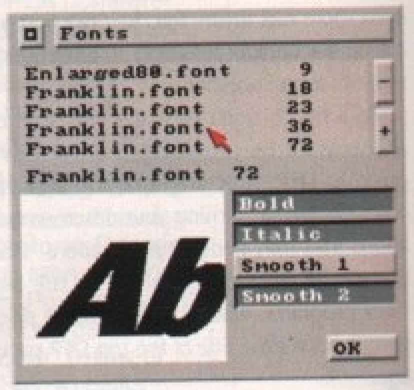


TVPaint and IV24 on test

The heart-rending saga of the IV-24 and its associated (and somewhat problematic) paint package goes from strength to strength. As promised in last month's update spectacular I have indeed got my sticky little fingers on the board's latest release, TVPaint. The package itself is identical to the Harlequin variant apart from the Big Edit option, which allows you to scroll around and edit images above the board's available resolution, and the fact that there's no support for an Alpha channel – that particular option requires 32-bit architecture.



A selection of the power requesters from TVPaint. If the graduation problem wasn't so severe, version IV could close the gap on the equally well-blessed opposition



On boot up, the program appears to be identical to the original. The differences only appear when you start to apply the paint. The old IV problem of slow screen update will still annoy purists, but it's not quite as bad as the appallingly slow Macro Paint.

Aside from the slight speed enhancement, the biggest benefit is the actual application of the paint. Unlike Macro Paint, TVPaint applies the correct colour to the canvas as the stokes are applied. As a result, it's sure to be infinitely more attractive to those interested in freehand art.

Having mentioned the plusses, it's time for the odd minus. Although the speed is far from perfect, the worst flaw concerns graduated areas. For example, when a sizeable airbrush is applied, it produces very noticeable colour stepping as the gradient fades. This also applies to all graduated fills. It's true the problem can be partially repaired with some additional dithering, nevertheless it's far from ideal.

The cause of the problem is down to ►

➤ the programs 12 bit display. It is possible to view the image in true 24 bit but painting is strictly restricted to12 bit, not an ideal situation by any means. To sum up, it's fair to say that TVPaint, although still by far the most flexible and functionally well-blessed package in the business, is nothing short of a disappointment on the IV. If the graduation problem could be addressed it could be a totally different story, but at present I find it very hard to recommend the extra expensive involved in upgrading to this particular variant of the generally excellent TVPaint. If any additional upgrades appear, you'll be the first to know.

For more details contact The Amiga Centre Scotland on 031-557 3260.

Saxon Publisher v1.2

With the recent release of PageStream 2.2 and the imminent arrival of ProPage 3.0, the DTP race is really hotting up. To add even more fuel to the fire, Saxon Industries are on the brink of releasing an all-new version of Saxon Publisher.

As a result, don't miss the July issue of *AC*, as we'll be providing the definitive guide to DTP, structured drawing and the costs involved in turning your onscreen creations into fully-fledged publications. Plus there'll be a thorough guide to the big three programs, which by then will be slogging it out for the title of the top DTP package.

Perhaps the most noticeable enhancement in Saxon Publisher is the addition of a fully independent PostScript interpreter, SaxonScript Professional. This standalone program comes as part of an overall package and is designed to convert standard Amiga-based output into its PostScript equivalent.

The next impressive addition is the option to employ both Macintosh and PC Type 1 fonts, without the need for any font conversior It's true that other packages such PageStream can also employ such for but only via a rather complex and con ing conversion process.

The next totally original and interest option is Saxon's proprietary monitor c bration utility, which corrects monit phosphors to ensure maximum onscree colour accuracy. With this addition, tha famous phrase "but it looked OK onscreen..." could become an excuse of the past...

Aside from the variety of whistles and bells which all three boast, perhaps the most important addition to any package is its ability to utilise additional fonts. Here Saxon Publisher does particularly well, with access to all downloadable PostScript fonts including Adobe Types 1 and 3, plus Compugraphic Type 3 fonts, which are widely available from ProPage, PageStream, Agfa Compugraphic, Adobe Systems and, of course, the public domain.

Presentation masterpiece

Way back in the January issue of *AC* we were the first magazine to explore Oxxi's excellent Presentation Master, a program which we believe has had nothing like the exposure it deserves.



Although the package is marketed as a presentation system, it has a lot more potential than just that. Along with its primary forte as a multimedia platform comes one of the most impressive PostScript paint packages yet seen on the machine.

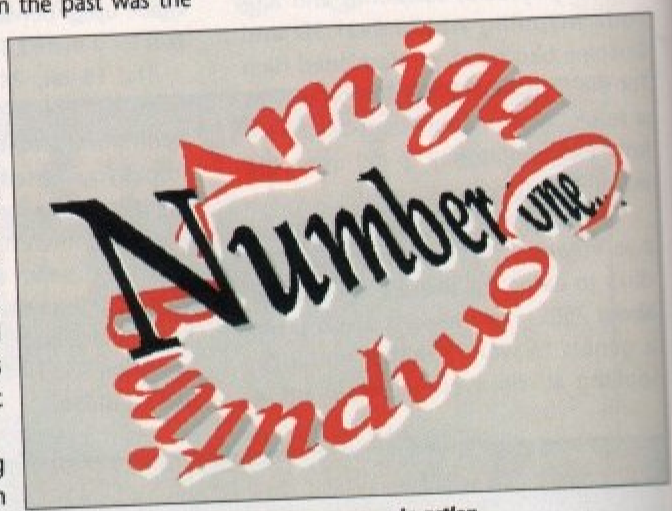
As a result, extremely stylish and professionally structured art can be knocked up at impressive speeds and then used as an individual element within a presentation, or added to the program's text and graphical display formats to produce quite stunning results.

The only problem in the past was the program's inability to save out separate EPS files from the aforementioned PostScript paint module. The only way to extract PostScript for application within DTP packages was to export the entire page and then incorporate this into your journalistic masterpiece.

Now this irritating limitation has been banished thanks to a new module which makes it possible to select either a single element within the PostScript image, or alternatively a group of images. Once selected, these can be saved out as individual EPS files and pasted with ease into any DTP package.

This single module instantly transforms the Presentation Master into a perfect and extremely powerful PostScript paint package ideal for avid DTV fans everywhere. An added bonus is that the new files will be in the standard Adobe Illustrator format, thus the images should appear onscreen in all their PostScript glory in any of the major DTP packages.

According to the program's author, Gary Bonham, a whole series of modules are planned and will either be released as commercial additions or freebies through the PD. Watch AC



A perfect example of PM's paint program in action. Only an IFF, but PostScript is on its way...



Hot news for GVP's board

It's been a trying time for GVP's luckless 24-bit board, but finally there appears to be light at the end of the tunnel. Added appeal is provided by the arrival of TVPaint, but this is only the tip of the iceberg, as GVP make a valiant attempt to claw back some appeal for their ill-fated creation.

Employing the board to its full potential is a little more involved than simply installing the software. First you must replace a ROM on the board itself. I can hear your screams from here, but don't despair – the installation is simplicity itself. Perhaps more importantly the aforesaid upgrade is completely free.

Silica, the UK distributor of the IV, are at this very moment posting new ROMs to all registered users. The new chip has a dual purpose – to fix any incompatibility problems with software such as TVPaint, and to speed up the board's notoriously slow screen update.

The first objective appears to have been met completely, but to be honest the increased update speed is at best negligible.

The second bit of excellent news is that the new ROM isn't the only freebie on offer. As regular readers will know, the IV24 requires a RGB signal to employ both picture-in-picture (PIP) and its on-board frame grabbing options. As a result, 90 per cent of users without access to RGB video equipment require a splitter to convert a composite video signal back into RGB. Yes, you've guessed it, a splitter is also on the way to every registered user, again completely free...

Further details are a bit sketchy but it appears that it's a fairly bog standard unit aimed at the general user. Silica spokesperson Andy Leaning added that a broadcast-quality unit will available later in the year at a very affordable price.

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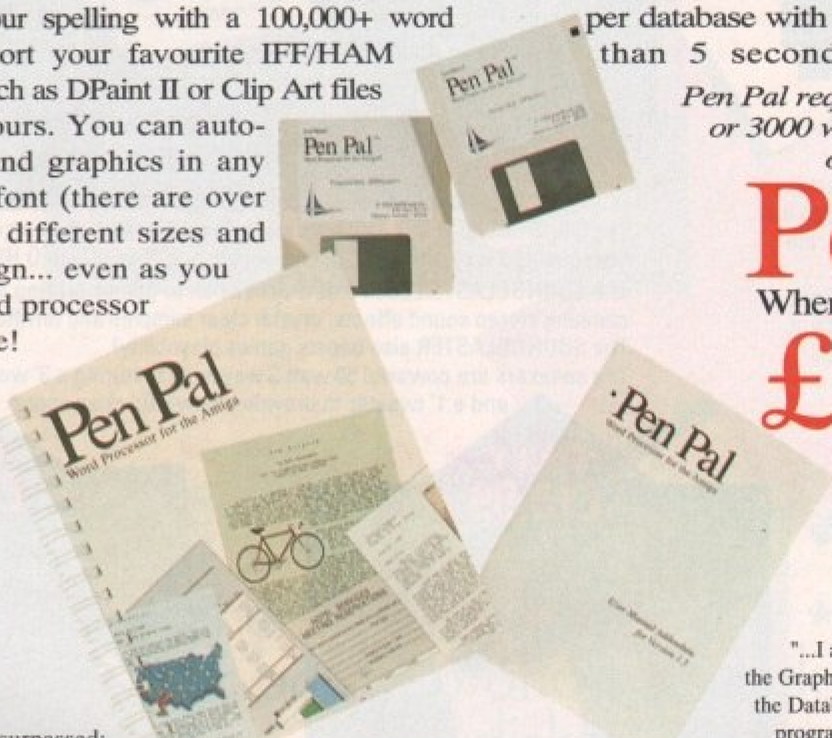
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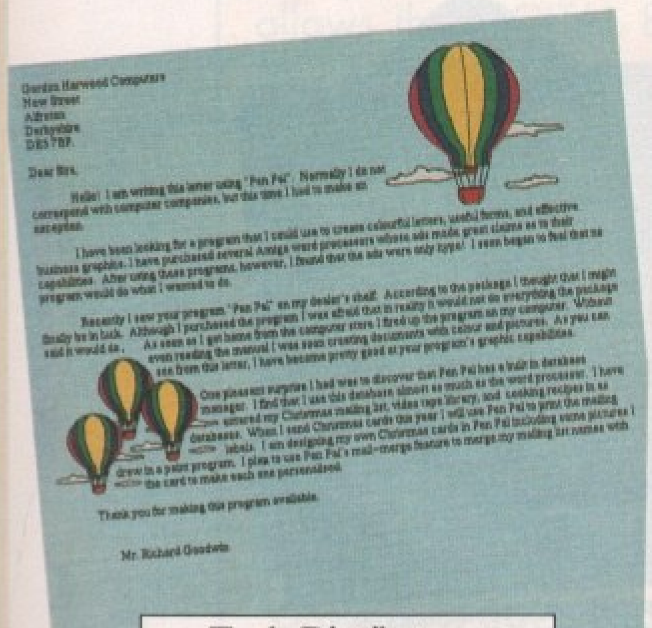
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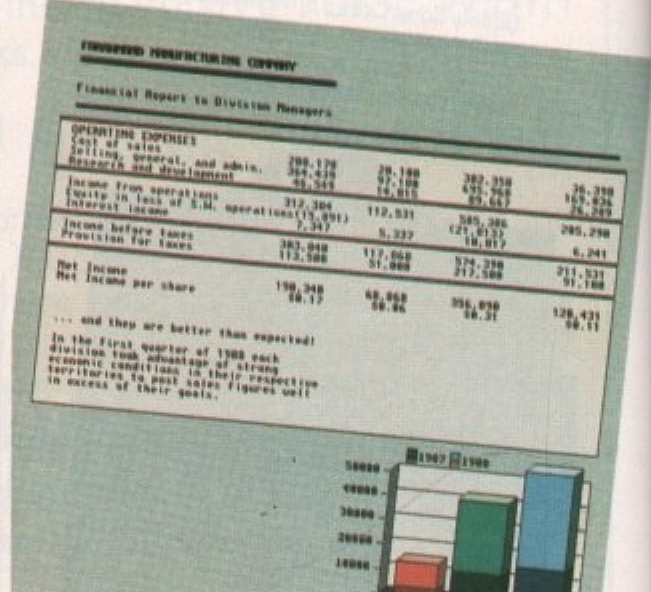
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Pascal with *pzazz!*

Pete Bullock looks at HighSpeed Pascal, a powerful version of an old language

When it comes to programming your computer it is obviously important to decide upon a language to use. Some languages are better suited to certain applications than others and it can be a difficult task ascertaining which approach to adopt.

The most popular language on the Amiga is undoubtably C – not surprising, as most of the operating system was developed in BCPL. However, HiSoft have just released a Pascal compiler which is set to rival C for its low-level programming features and speed.

HighSpeed Pascal is a new version of an old language. Pascal was originally conceived around 1972 by Professor Niklaus Wirth of the Zurich ETH – his institute – and has remained in use in academic circles ever since its inception. It is not only an academic language, however, as Turbo Pascal has proved on the IBM PC.

Structured

Pascal is widely taught structured and first contact with it is usually found when somebody takes on a course of higher education. Most computer science students will find that their course relies heavily on Pascal programming and it is the first structured language except for Basic which they come into contact with.

Pascal is a strongly typed language, that is to say that the variable types and declarations cannot be mucked about with. For instance, in the C language there is no type checking which basically means you can store any type, any place, any time.

Not that C programmers drink a lot of Martini, but if you put an integer where a procedure or function expects a char variable to be the compiler won't know the difference. In Pascal you need to rely on types being of the correct, well, type!

This is how Pascal encourages good programming skills – it is a tidy language, and enables a program from one source to be easily modified and maintained at a later date by a different programmer.

Pascal programs are much more readable than, say, a C program will be, and as such more understandable in a quicker period of time than their C equivalents.

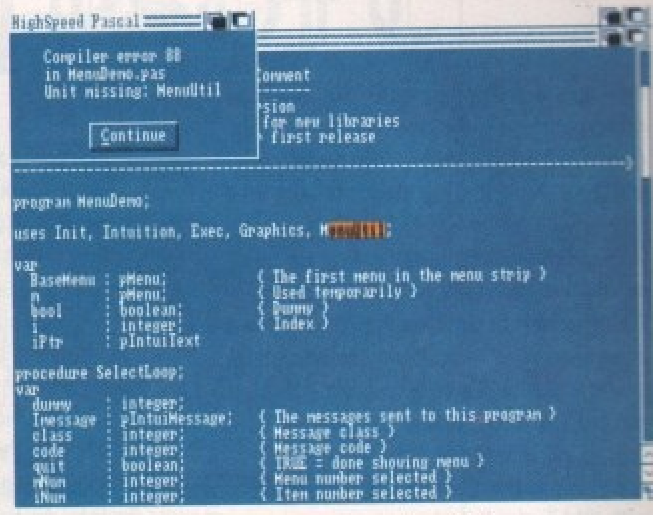
Pascal has been in use for such a long time because of its ability to teach and encourage structured programming. It is quite likely that it shall remain so until another language with better features comes along.

Contender

Such a contender for the programming crown could well be MODULA-2 which is a relatively new language intended to supersede Pascal. But it has not been taken up by many people and could well be a misnomer.

Anyway, back to HighSpeed Pascal. The first thing that strikes you about this product is the packaging – a disk wallet containing two versions of the Workbench, 1.3 and 2.0, and the Pascal compiler disk. Accompanying these are the rather large ring-bound manuals, one being the user manual and the other a technical reference manual.

The IBM PC is the industry-standard personal computer and as such has a number of compilers. Borlands' compilers are popular, such as Turbo Pascal and Turbo C, and HighSpeed Pascal on the Amiga is intended to allow portability of programs between the machines.



A compiling error is notified

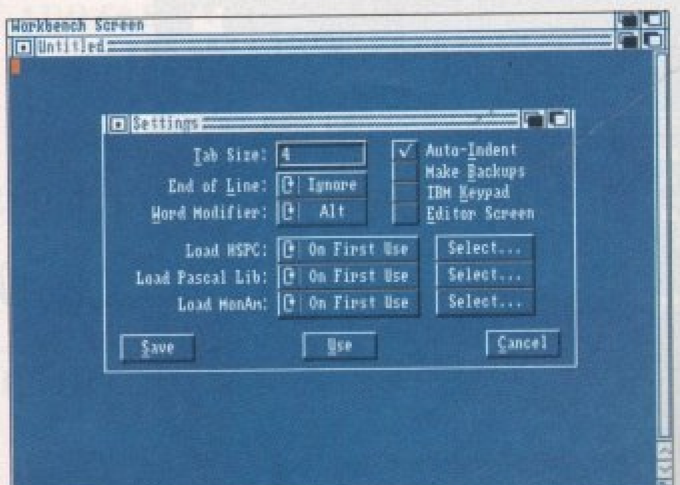
HighSpeed Pascal contains many commands which emulate those in Turbo Pascal, particularly the graphics commands for setting palette colours and drawing lines. To test this out I took a mandelbrot set program written in Turbo Pascal and entered it into the Amiga. The program needed a few small alterations where the Turbo command was not available to HighSpeed Pascal but this was minimal.

The first thing I noticed was the speed of the compiler – this is where the name HighSpeed comes from! It's very fast, and compiled the program in under five seconds – well, after all the typing errors had been corrected. Indeed it's so fast that there's very little time to see it compiling all your program – it only displays the current line at the time of compiling. If your program is fairly short, say 20 or 30 lines, you'll only ever see it compile one or two of them.

After compilation, the mandelbrot set program ran and worked as expected. This is a test of floating point maths and as such is quite a good estimate of how fast ➤



Creating menus in HighSpeed Pascal



Preferences may be set for the session or saved as default values

the calculations are. The program took 100 iterations and approximately five hours to complete the set, which in a high-level language is relatively fast. A similar program written in AmigaBasic would probably have taken much longer.

HighSpeed Pascal also caters for those who already program or intend to program their machine at the lowest level, as it takes advantage of all the custom library routines in the Amiga's ROMs. It is a relatively simple task, as all the library routines are contained in a datafile called a unit. This approach is used to ensure compatibility with IBM Turbo Pascal.

A little difficulty was encountered when using these functions, but HiSoft do offer a technical support line. If you're having problems, I strongly recommend you get in touch with them.

Each library has an associated unit and this provides support for all the C structures and constants which the Amiga expects when using the ROM routines. All the structures, constants and library routines named have remained the same except for those which conflict with the reserved words in the Pascal language. In this case HiSoft have added an underscore to the library name and have documented most of the changes in the manuals.

Test

As a test I decided I would try to initialise a screen and window structure and use these to open a screen and a window. After consulting the Libraries and Devices manuals for the required screen and window structures I began to program in Pascal.

As I mentioned earlier, the structures required are contained within the associated library unit. All the user need do is initialise the structures with the required values and then call the resident library routine. Filling structures is fairly easy, although with a language like Pascal the code is much more involved than, say, its assembler equivalent.

If you're defining a type as a specific structure, you will find that all the structures you require are spelt the same as in the ROM manuals but prefixed with a "t" to denote type. Likewise, all the pointer types are prefixed with a "p". After having completed the programming the program was compiled. Typing errors reported by the compiler were corrected and then the program was run. It worked fine – the only error was in the text contained within a Pascal string.

The title of the screen was prefixed with a "k" which was not specified within the text string, and this "k" also appeared in the windows title – soon sorted out by using a function supplied in one of the units to convert from a Pascal string to a C string.

If you are interested in programming at a grass roots level then HiSoft recommend you get hold of the ROM Kernel manuals from a good bookshop, as you'll need to use and convert the various structures to the Pascal equivalent of a structure which is a record. However most of the structures have already been defined and you should have no problem in using these within your own programs.

Supplied with the package is the Devpac debugger which allows you to debug your Pascal programs at a source code level. The explanations of various debugger commands are thorough and include items to enable you to get to the root of the problem straight away.

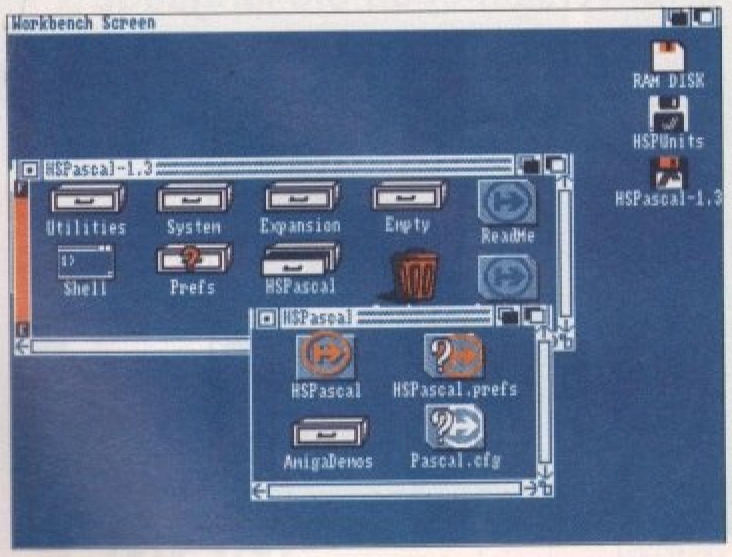
Loop the loop

One thing which is particularly annoying is that you cannot interrupt your program while it is executing, so you cannot break and debug. If your program runs in an infinite loop you simply have to turn the machine off and start again. I'm sure a break could have been implemented but it seems you have to program it into your programs yourself.

While using the product I experienced a number of problems concerning built-in library routines and their expected variable types. This is not much of a problem as a quick phone call to HiSoft's technical support department helped me out enormously. In fact, I recommend that you register with their technical support department – the help they supply is invaluable.

As a product, HighSpeed Pascal is a good buy – it's relatively cheap and of good quality. The documentation is excellent and you are supplied with two versions of the Workbench depending on which machine you are using – a 1.3 or the new 2.0 500 Plus.

If you have learnt Pascal at college and are interested in programming your Amiga using the language, or want to take full advantage of its low-level facilities, then HighSpeed Pascal could well be what you're



The program's assorted files and folders

Manual dexterity – the documentation

Some products are let down by inadequate documentation. This can be a major problem if you buy a product and intend to work with it seriously. With HighSpeed Pascal, however, the documentation is of an excellent quality and is aimed at the beginner as well as the professional user.

The manuals supplied with the package contain much information to get you started as soon as possible, whether you are an old hand or a beginner. There's a complete introduction to the language explaining Pascal's various statements and variable types and information on file handling. The chapters on the language are very informative and help instil a better understanding of how programs are constructed.

An introduction to the language takes up a large part of one manual and I suppose is intended to teach Pascal programming, albeit at a very rudimentary level. However it is complete and if you've programmed in other languages it should suffice as an introduction to the language.

If you are a beginner then you should consider buying a textbook, as this will contain much information and examples to get you started. I have no reason to believe that examples contained within a textbook would not work in HighSpeed Pascal – it contains, as far as I can see, all the standard types and statements of standard Pascal as well as other customised features.

Files on the Amiga can be a real pain, needing many variables to get you working with them. But HighSpeed Pascal takes the commands used in standard Pascal and adds a few of its own to enable the efficient programming and use of files.

The reset and rewrite commands from standard Pascal are implemented along with a few other file commands. Compatibility with standard Pascal and Turbo Pascal is maintained as much as possible.

As in Turbo Pascal, the various constants and library routines are contained within a unit. You can inherit a unit into your program by the Uses command. You would, for instance, type the following to inherit the various library routines and constants:

```
program Test_File;
uses exec, Amigados, Intuition;
type
Test_Array = PACKED ARRAY [1..100] OF CHAR;
     Array_Ptr = ^Test_Array;
var
     Count : integer;
     ...
```

This would inherit the exec and dos library routines and also the intuition functions and constants which enable you to use screens and windows. As you can see, it is a fairly easy task and should present no problems to an avid Amiga programmer.

There are chapters on some of the units functions and a complete list of error messages. The error messages are not explained enough for my liking and more thought could have been put into the documentation. This could be particularly annoying for the beginner where a full explanation is required in order to get things moving.

Also implemented is an inline assembler so you can write assembly language routines alongside Pascal routines, if you're interested. If you're considering working with the assembler, a complete list of instructions is provided and the assembler supports all the various commands of the 68000 processor including the DC directive for declaring types and sizes.

The user manual is of a good quality and contains information on the editor explaining the use of the various features like cut, copy and paste. There is also a section on the compiler – how to compile, building your own units and its various menu functions.

Compiler preferences are covered too. The preferences contain things like range checking to ensure that array dimensions are not exceeded within your program.

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GraphicStation Support

TDM internals

Stevie Kennedy concludes his tour of GraphicStation's file manager

Last month's support column took the form of an easy introduction to The Directory Manager (TDM), which is central to many of the operations you'll be carrying out with your GraphicStation disk. To use the program just to copy and delete files, however, would be to miss its great potential.

You should by now have noticed the funny little bar at the bottom of the central gadget strip. This is the external command gadget, and its deceptively modest appearance belies its true power. It is one of TDM's most useful features.

When you first load TDM, the external command gadget will sport the word "Run". This is the command it is presently set to apply to the program of your choice. To run a program this way, click on the program to highlight it, then click on the command gadget. If you have chosen an executable file – a program rather than a document or icon – it will now run.

Numeric keys

So much for running programs. If you're thinking "so what if I want to use another command?", try the numeric keys at the top of your keyboard. Keys one to zero toggle the command gadget through the ten commands you can set up for your own use, though only five of them are in use when you boot up The GraphicStation.

Using Brun to run a program in the background, MMPP to view normal and powerpacked text files, PPShow to examine IFF files, and QED to edit text files, you can control, through TDM, a wide variety of tasks. Just press the correct numeric key to select the command you need, then click on your file and on the command gadget and off you go.

Try moving to the S: directory, then press numeric key five to display the QED command. Now click once on the startup-sequence and once on the command gadget and the QED text editor will load up with your startup-sequence ready to edit.

You should be able to carry out as many operations as you like without having to directly load QED or resort to CLI to use PPShow or MMPP, but what happens when you tire of the five options on offer?

The left-hand side of the TDMConED screen is dominated by the ten external command bars, and changing them is very easy. To get rid of the "Cmd 6" string and replace it with, say, the EXECUTE command, you just click in the box containing "Cmd 6", delete it, and type EXECUTE. If you save the prefs settings and reload TDM, external command six will now be Execute, and you can apply it to any script command you'd like to run.

As you go on to customise your GraphicStation disk, deleting the odd program you never use and adding your own, TDM's ten external commands can be used to control such utilities as NewZap to edit hex files, or the AMOS compiler.

The uses of this function are really only limited by your requirements. At the moment, the external commands function isn't as stable as it might be, but author Chris Pettet will be continuing to update TDM. Register as a shareware user and you'll receive all future upgrades.

Settings

Continuing with TDMConED, the right-hand side of the screen enables access to some other settings. There's the system time, which you can't change from here, the palette control sliders, and the location for TDM external files. To the left of these is a section for archiving programs.

You shouldn't change the external files path unless you've moved the TDM.cfg file, and the archivers will be of use only if you put one on the disk. There wasn't enough room on the jam-packed GraphicStation for an archiver, but if you later copy one to your disk, you can set the extract, add, and list parameters according to the program's instructions, then use it from TDM by clicking on the files you want to archive and pressing V.

The palette sliders, on the other hand, are ideal if you find our tasteful, refined, easy-on-the-eye colour scheme is not to your liking. If you are a person of such (ahem) dubious taste, you can change all of TDM's colours except black and white, then save your prefs so that the program boots in whatever colour scheme you find most agreeable.

To aid you in choosing your colours, there's a list of the various text strings you'll find on your TDM screen below the set of sliders. Keep an eye on these as you change the default colours to ensure you don't end up with text that's too hard to read against the background colour.

Once you've fiddled enough and saved out your TDM preferences, you might be annoyed at having to quit TDM and reload it so you can use the new settings. You don't, however, have to go through this hassle – all you need do is press the U key to update your prefs settings from within TDM. This forces TDM to read the current TDM.dfg file from the S: directory and pick up the new settings.

To finish this month, I can't leave you without mentioning the other two very useful key commands available direct from TDM. If you want to format a disk, for example, just press the F key. As long as the Format command is in your SYS:System directory (which it is on The GraphicStation), a requester will pop up to ask which drive you want to format, then you'll be asked for a name.

If you want to read a text file, and can't be bothered using the more powerful MMPP, TDM has a built-in text reader which can be used by highlighting the text file of your choice and pressing the R key.

Please note that no matter what you do, you won't be able to read powerpacked files with this option, and will have to resort to MMPP. Most of the documents on The GraphicStation are powerpacked, so the read function will be of little use at first, even though it's faster and easier than using an external command.

You should by now know enough about TDM to keep you going, so we won't be returning to it in the support articles. Remember that it is a shareware program, so if you're going to rely heavily on TDM, contact Chris at the address given in the About message (press the A key) and send him some reward for his labours.

Next month, we'll start to look in detail at the utilities on GraphicStation, beginning with Paul Burkey's Picturesque paint program.

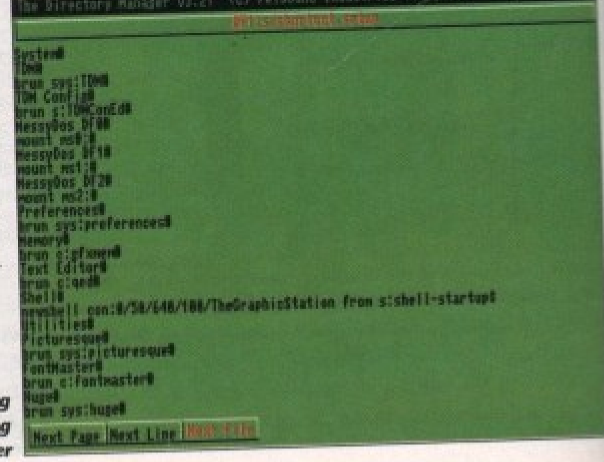
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TDMConED is friendly and easy to use



Format disks from inside TDM or the press of a single key



The integral reading function can make viewing text files a lot easier

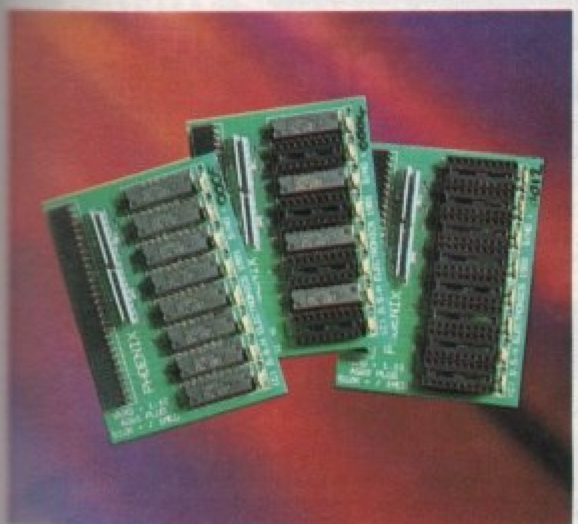
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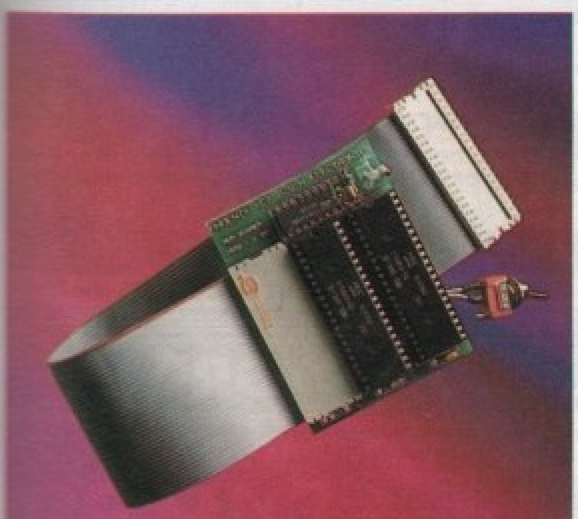
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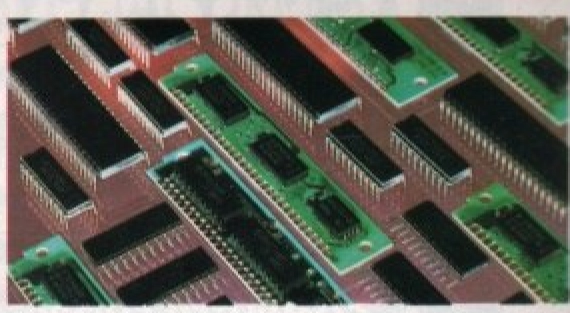
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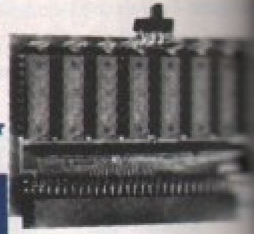
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THE *FASTEST* AND EASIEST WAY TO UPGRADE YOUR A500+ TO 2MB RAM!

Simply Plugs into trapdoor expansion area ☆
Increases total RAM capacity to 2Mb 'ChipRAM' ☆
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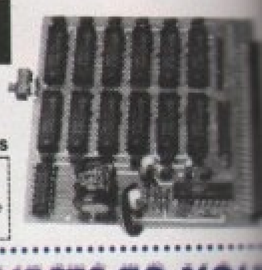
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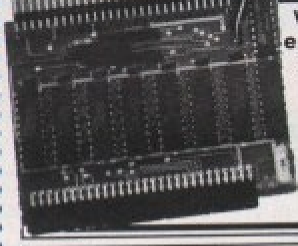
Fully populated board increases total RAM in A500 to 2Mb! ☆Plugs into trapdoor area, & connects to 'GARY' chip ☆Includes Battery-Backed Real-Time Clock ☆Socketed RAM ICs on 512K / 1Mb Versions

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N.B.: The expansion board requires Kickstart 1.3 to operate - Kickstart 1.3 upgrade available from us for £29.95



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With our MEGABOARD, you can further expand your A500's memory to *a total of 2MB* <u>without</u> disposing of your existing 512K upgrade (must be 4 x RAM-chip type, or not exceeding 9cm in length).

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NEW



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☆ Available fitted with 2Mb, 4Mb or fully populated with 8Mb

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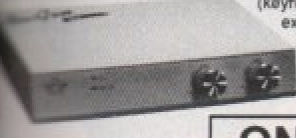
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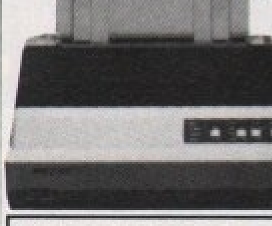
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When fitted, you will have a full megabyte of memory, enabling you to take full advantage of such utilities as Real 3D as well as being able to play the ever-increasing numbers of 1 meg-only games.

There are 25 M501s to be snapped up by all you byte-hungry punters, so what must you do to receive one of these babies? Easy, just answer the question on the entry form, snip it out and stick it in the post.

Very soon, a uniformed representative of Her Majesty's government could be delivering a gorgeous slab of memory to your very door!



Beef up your Amiga's RAM courtesy of the *AC* Beef-'em-up competition

- 100 per cent compatibility with all models
- Cut-off switch to revert back to 512k
- Battery-backed clock
- Easily installed

The questions:

1. What does RAM stand for?

a. Real Amiga Man ☐
b. Random Access Memory ☐
c. Running About Madly ☐

2. Which of the following is the correct spelling of EXPANDABILITY?

a. EXAPANDABILLYBOB ☐
b. CHIVES ☐
c. EXPANDABILITY ☐

3. On which page in this magazine does the phrase "TOO MANY SPIRIT LEVELS UPSET THE ECONOMIC INTEGRITY OF PERU" appear? ☐

NAME: ______________________

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Just tick the appropriate box, not forgetting your name and address, and send your entry to: *Beef 'Em Up Compo*, Amiga Computing, *Europa House, Adlington Park, Macclesfield, SK10 4NP*. To arrive by May 15 1992

Please tick if you do not wish to receive promotional material from other companies. ☐

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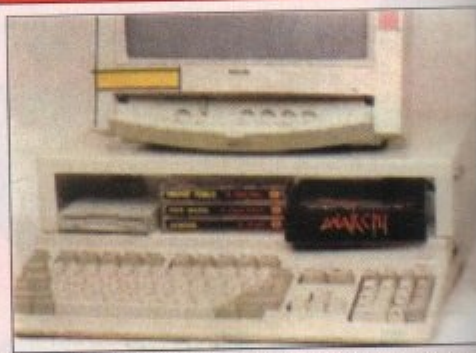
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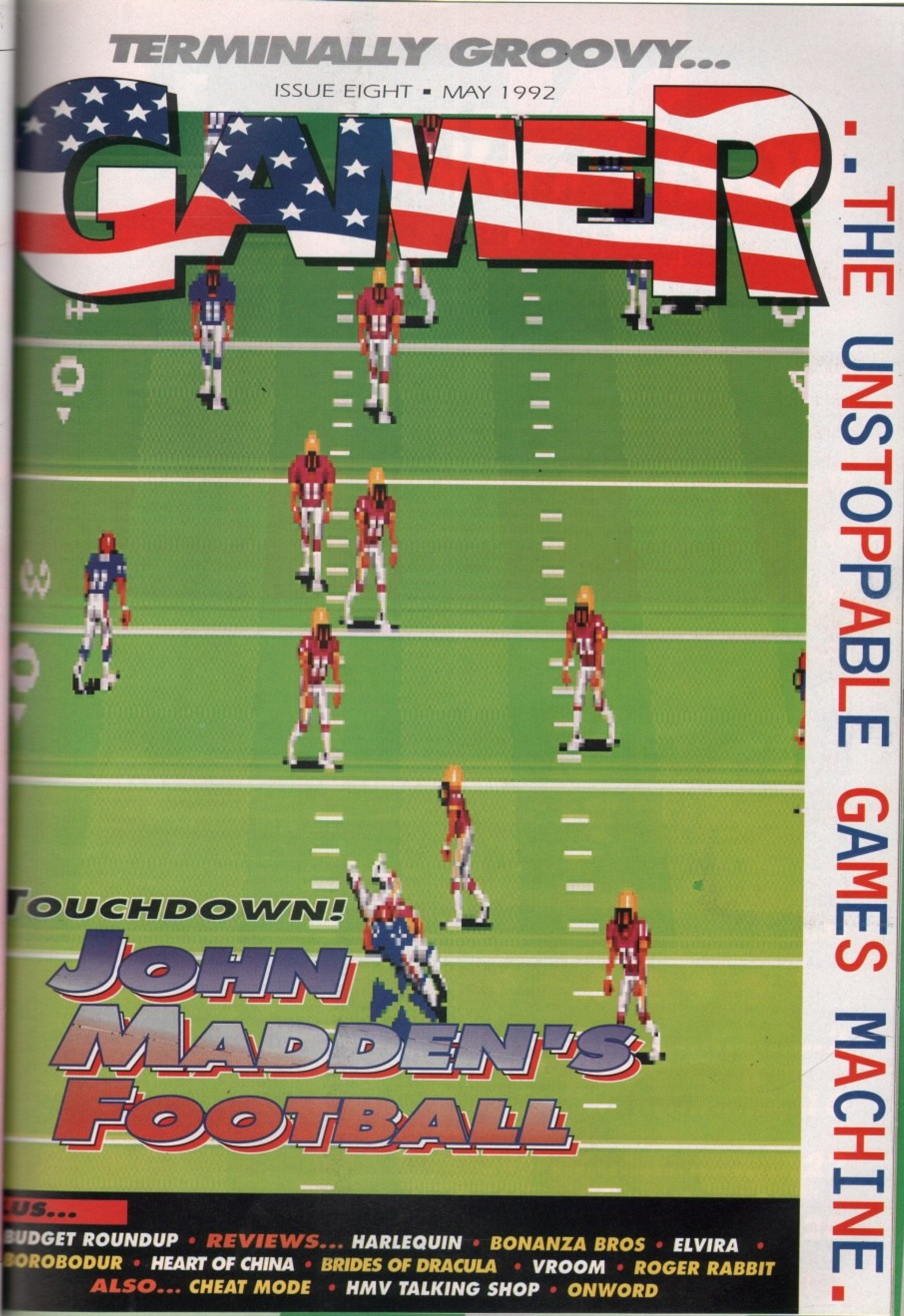
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ISSUE EIGHT ▪ MAY 1992
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ONword

Lets delve into the Amiga lucky dip...

Willy, Horny and all the gang

As well as the rather delectable Heart of China reviewed in these very pages, Dynamix have also got Willy Beamish waiting in the wings.

Those who keep an eye on the PC games market will probably have heard about this troublesome tyke, but at long last he's coming to the Amiga.

Willy's an average nine-year-old, living at home with Mom, Dad, little sister, big sister and a dog called Horny. However, life as a nine-year-old offers plenty of scope for mischief and adventure, and that's just what you'll get when you take control.

Not only will you have to cope with the usual pre-pubescent hassles, like parents and teachers, but you've also got the more unusual aspects of life to deal with. Like your Grandad's ghost who pops up to help out, and the vampire babysitter from Hell. Jokes and puzzles galore, and some cartoon quality graphics.

It should be out soonish, for a measly £34.99. Full review, as always, next month.





Tanked Up

Good news for sim fans, 'cos Empire are all worked up and ready to let their long awaited sequel to Team Yankee roll out of the shed.

Pacific Islands is the title, and it looks set to beat even Team Yankee into a cocked hat. The year is 1995, and some sinister rogue Ruskies are threatening world peace by invading the Yama Yama Pacific atoll. Your platoon is closest to the scene so it's up to you to stop them.

It looks a lot more involved than its predecessor, with a lot more attention to little details plus faster 3D. Look out for a full review next month.

Hit and Myth

Also lined up for the review treatment next issue is System 3's hot new property. Myth has already swept the board on the 8-bit formats and is garnering a bit of a reputation on the 16-bits.

Reputedly System 3's best game since IK+, it's an everyday tale of traversing Hell to bring goodness and light to the world. Apparently the graphics have been given a major overhaul since we last saw them, and the whole thing moves a lot more sexily now. Could it be the bestest platform game ever? If the word on the grapevine is anything to go by, it could well be.

If you're impatient, then it'll be nestling on the shelves of your local



Gamer Big Day Out

Yup, that's right! Keep June 13 and 14 free in your diaries. We're offering you the chance to have a big day out, courtesy of everyone's favourite fighter pilots, Microprose.

For the mere price of a stamp you could be enjoying the Air Tournament International 1992, on Boscombe Down. Loads of planes zooming about being exciting, plus loads of other things to do. And what's more, it's an absolute doddle to enter. No questions or captions to make up. Just send your name and address to the following address to be in with a chance of winning one of five pairs of tickets:

Yvette Weir, Microprose Software,
Unit 1, Hampton Road Industrial Estate,
TETBURY GL8 8LD

Don't forget to mention **Amiga Computing** when you write. If you want further information on the show then call 0891 122997 (calls cost 36p per minute cheap rate, 48p per minute all other times). And, hey, have a nice day y'all.

In the air tonight...

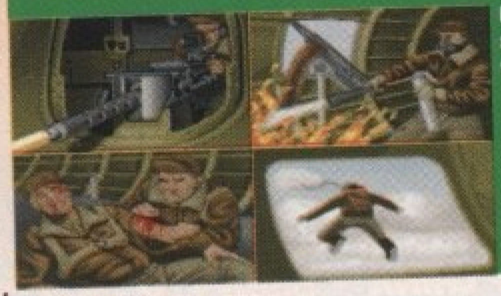
Microprose are continuing to prove themselves a right old bunch of smart alecs with some even bigger and better strategy/simulators.

B17 Flying Fortress is lined up for take off this summer, and involves you not just flying a plane, but commanding a ten man crew. Each crew member has his own temperament and attitudes, so careful command is needed to keep everyone out of each other's hair.

At any time, you can step into their shoes and do their job, so you could play the whole game as the rear gunner or take the harder route and do everything yourself, from flying to navigating to bombing. Promotions come as and when you think your crew have earned them, and it all looks very impressive indeed.

ATAC is pencilled in for a September release and looks even bigger than B17. It stands for Advanced Tactical Air Command, and takes place in a spooky and corrupt future where drug barons are running the world from Colombia.

You are put in charge of no fewer than 250 secret agents, four F-23 strike planes and two assault helicopters. Tracking the drug trafficking lanes and striking when they least expect it is the only way to win. Sounds like a more in-depth version of Armour Geddon. Can't be bad.



PC screen version





B/ackMaiL Bonanza!

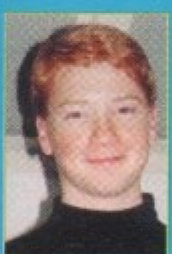
Here's a pictorial treat. Our lovely ex–Gamer editor, Jools Boardman, doing a quite convincing impersonation of big, cuddly Pat from Eastenders. Apparently, he's been offered the job as Pat's stand in for all her stunts and any saucy kissing scenes with Frank Butcher, played by balding hunk Mike Reid. Jools is said to be "considering the offer". More news as we get it.

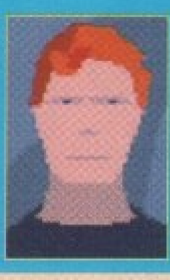
The Ginger Ninja

Now here's a competition for all you ladeeez in the house. Who's this fine specimen of prime man meat? It's none other than Andrew "Beefcake" Southam, our chum from PC Today, local meringue-eating champion and star of Another World.

I just know that all you luscious young lovelies out there are swooning yourselves silly over him, so here's a chance to win a signed photo of the man himself. And just to bump up the stakes a bit higher, we'll bung in a free copy of the new Roger Rabbit game (which we must point out, will not run unless you install it on to a hard drive).

To claim your piece of this hunky stud, and of course the Roger Rabbit game plus some badges, T-Shirts, posters and whatever else will fit in a Jiffy bag, simply write and tell us, in no more than 100 words, why you deserve this prize. Grovel, beg, lie and generally lick our shoes and we'll send the goodies to the most sycophantic letter we receive. Good luck ladeeeez.





THE DREAM TEAM

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hiding under desks - daniel "chameleon" whitehead
boiled sweets - eddie "bikini line" mckendrick
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GAMER

INNER VISION

Bingo, hatstand, palaver, partridge and...

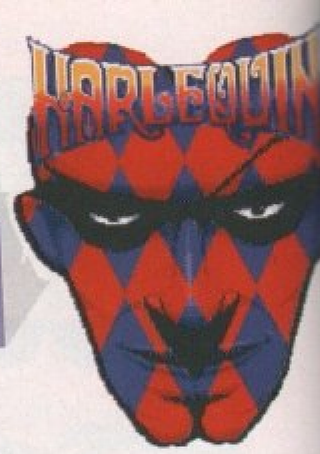
REVIEWS

REGULARS

Gamer Gold

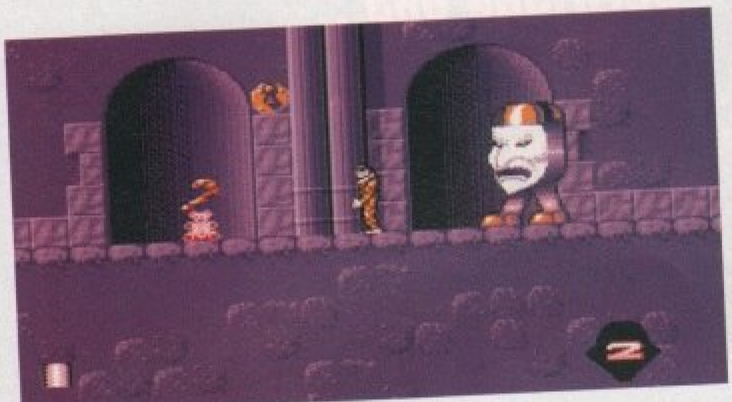
Men in funny pyjamas, it's...

HARLEQUIN



GREMLIN ▪ £25.99 ▪ 1/2 meg ▪ Joystick ▪ Out now

Harlequin, the world's greatest Mary Poppins impressionist

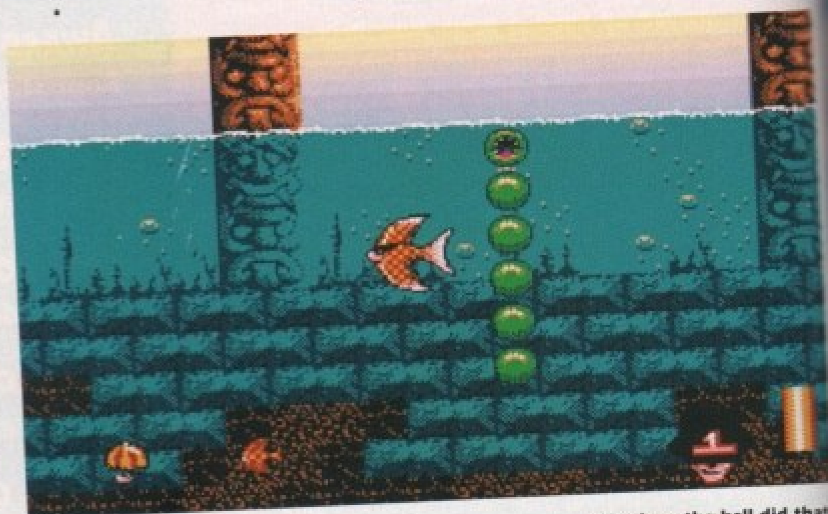


He's behind youuuuuuuuu!!!





Bouncy, bouncy, bouncy bounce



Now how the hell did that happen? I'll never eat another fish finger as long as I live

Gremlin are ultimately famous for brilliant driving games, so it is indeed very strange that a platform game going by the name of Harlequin has appeared on the Amiga. Harlequin has been billed as probably the strangest game ever. Hmmm, we shall see.

Does everyone know what harlequins are? They're the chaps who dress up in masks and funny chequered pyjamas. They look like a cross between Dick Turpin and a court jester. Bugger knows what they do.

Apparently, in a far-off forgotten corner of the imagination is a smart world called Chimerica. This world contains all of our dreams and distant memories. For years and years it has thrived due to everyone's hopes, dreams and memories.

The sole inhabitant is a young boy with the name of Harlequin. Fancy being stuck with a name like Harlequin! A John or a Dave would have been far more acceptable. Anyway, Harlequin spent his early years exploring the bizarre world of Chimerica.

But all children grow older and Harley is no exception. Sure enough, the world of Chimerica began to lose its appeal – it was a case of "been there, seen it, done it" for poor old Harley.

He had become accustomed to the bizarre and unexpected. He had finally turned into an adult. Gone were the days spent playing with Lego. So a bored Harley decided to bugger off and get a new life.

In his absence, Chimerica slowly fell into a state of disrepair and the land entered an age of cold reality (how a land falls into an age of cold reality is beyond me). So with the prospect of no salvation in sight, Chimerica's sadness deepened until one day its heart broke and everything was silent.

The years rolled by and then out of the blue, Harley appeared (hoorah). What he saw he didn't like and he knew it was all his fault, so he set off with one all-consuming purpose – to mend Chimerica's broken heart.

You play the part of Harley and you must find the four broken parts of Chimerica's heart before finding the exit which has now become a heart itself.

There are many lands in Chimerica for you to explore. There is a definite puzzle element to the game – a lot of the time it involves pulling levers and such like. A lot of the puzzles are quite puzzling – I suppose that's why they call them puzzles – but after a while you get to know how things work and the rest of them become a little easier to work out.

To help Harlequin out there are several objects dotted around that are essential in his quest. My favourite object is the Space Hopper which allows Harley to reach higher platforms, and he can even crush his enemies who plague the land of Chimerica.

Hearts are Harley's only kind of fire-power, but thankfully there are two sorts – pink ones and red ones. The red hearts are the more powerful of the two, but they don't last long.

Overall Harlequin is a damn fine platform game – it's a perfect example of how far the genre has advanced. The graphics in are stunning to say the least and it's backed up with some top-notch animation.

Harley prances, skids (tut, tut), jumps and swings about the screen like a demented monkey. On the sound front there are a whole plethora of tunes for you to enjoy, but you have an important choice to make between the tunes and the sound effects, because unfortunately you can't hear both at the same time.

Harlequin has an easy control system, so you won't be frustrated when the going gets tough. It's got to be said that this is a stonker and a half. I don't really think strange is the word to explain Harlequin – perhaps "completely bonkers" is more appropriate.

Jonathan

VISION GGGGG
Graphics are really quite brill and they seem to get better the further you progress.

AUDIO GGGG
Choice between music and sound FX, you won't be disappointed whichever one you choose.

PLAYABILITY GGGG
An easy control system, the puzzle element giving the platform genre a new lease of life.

ADDICTION GGGG
It'll keep even the most hardened gamesplayer going for absolutely ages.

91%

Are you taking us seriously?

Tell us what you really think about Gamer, and you could win some fabulous games prizes!

Please underline the appropriate answer in each case

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(c) I never read Gamer – today is a total fluke

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(a) Less serious
(b) Exactly the way they are now
(c) More serious,

3 This particular issue of Gamer had...
(a) Not enough pages
(b) Just the right number of pages
(c) Too many pages

4 I would like to see Gamer review mostly...
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(b) More serious games, ie strategy/simulation/adventures
(c) All types of games

5 If Gamer was to close next month I would...
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(b) Be slightly disappointed
(c) Be delighted

6 As far as Hakpak Is concerned....
(a) I want to see it come back
(b) I'm simply not fussed
(c) I don't know what you're talking about

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(a) A brilliant idea
(b) Nothing special
(c) Annoying

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(c) I read my dad's/mum's copy

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Charts				
Previews				
News				
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Hakpak				
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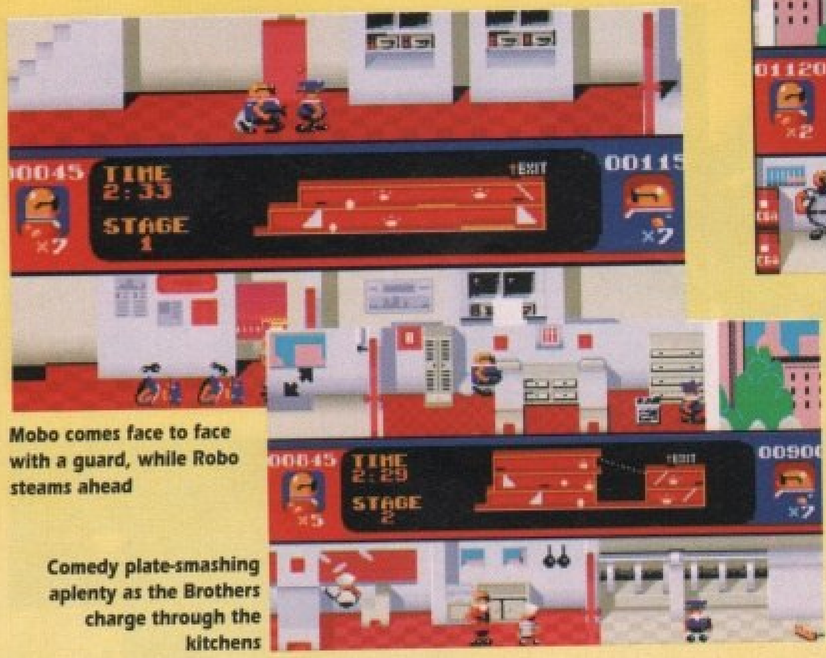
But where's Lorne-Green?

BONANZA BROS.

US GOLD ▪ £25.99 ▪ 1/2 meg ▪ Joystick ▪ Out now



Mobo goes for the Krypton Factor approach to burglary



Mobo comes face to face with a guard, while Robo steams ahead

Comedy plate-smashing aplenty as the Brothers charge through the kitchens



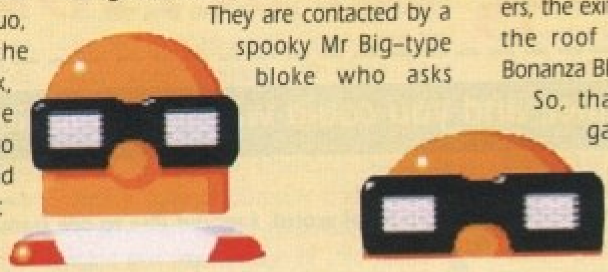
Avoid the searchlights if you want to earn a whopping bonus

There's been a lot of thieving going on in computer games recently, hasn't there? What with Hudson Hawk quipping and robbing his way through Ocean's platformy romp and three bizarre animals nicking jewels in Electronic Zoo's Daylight Robbery. Now US Gold have joined in with the light-fingered duo, The Bonanza Bruvs. What has the world come to, eh? All these sick, twisted, commie pinko software houses encouraging our children to steal and commune with Satan, and listen to loud rock music and not wear ties and smart shoes.

They're luring the youth of today to bathe in the fire and brimstone of Hades. Corrupting the innocent wide-eyed teenagers with their promises of digital violence and pixelated titillation. Still, it's a larf, innit? And Bonanza Bruvs is one helluva larf.

But before we get too deeply embroiled in the ups and downs of the gameplay, let's take time out to have a mug of steaming Bovril and check out the plot for this festival of thievery.

The two brothers, Robo and Mobo, have just given up their life of crime. Very sensible of them. But of course, things don't stay that way for long. They are contacted by a spooky Mr Big-type bloke who asks them to do some jobs for him. OK, so it's exactly the same plot as Hudson Hawk, but this Mr Big actually wants our heroes to rob his own buildings.



No, he's not trying to fiddle the insurance, but he wants the world's best burglars to test his security systems for him. Cunning, eh? Thus, the orange twosome are ordered to retrieve a set number of objects from all of Mr Big's buildings. They must use all of their skill to avoid or stun the guards, dogs and security systems.

Once all the objects in a building are nabbed by either or both of the brothers, the exit opens and you can leg it to the roof to nab a lift from your Bonanza Blimp on to the next level.

So, that's the basic idea of the game, but how well does it work? Very well actually. The graphics are small, because the screen is split in two for the two players, but there are plenty of nice little details to watch out for. They've even managed to keep the ray traced feel to the sprites from the arcade.

The sound isn't quite as good as it could have been, with a fairly crap tune and few FX, but what really counts is gameplay and Bonanza Brothers has got it where it matters. The relatively simple idea means that it's easy to get into and soon you'll be sneaking around like an expert tea leaf.

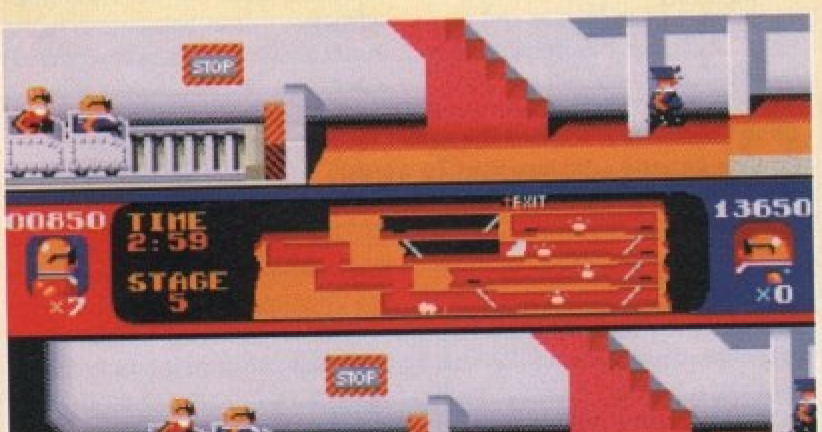
With two players, the action really hots up as you race against your mate to collect more objects.

An added element of strategy comes in when you get knocked over by a guard. As you sit on your bum, all the objects you pilfered are scattered about you and an unscrupulous partner can nip in and steal them for his or her own ends.

So before you start, it's always best to check that your so-called "mate" is really on your side, or you could be left to get out of the building alone and empty-handed while they twiddle their thumbs on top of a massive pile of bonus points. So, do it to them before they do it to you!

All in all, Bonanza Bruvs is a pretty groovy game. The run-around-and-collect-things formula is fairly old hat these days but the two-player option keeps it fast and furious. If you're looking for something a little bit out of the ordinary, give the Bruvs a go.

Daniel



Mine-cars send the duo hurtling down into the caverns to steal loadsagold

VISION GGGG
Small but well animated sprites with cute touches aplenty.

AUDIO GGG
Minimal FX and a passable tune.

PLAYABILITY GGGG
Instantly appealing and great fun with two players.

ADDICTION GGG
Perhaps too repetitive in the long term, but still worth a look.

83%

For all you closet terrorists out there...

DYNA BLASTER

UBISOFT ▪ £30.99 ▪ 1/2 meg ▪ Joystick ▪ Out now

GAMER GOLD







Blimey. What a dodgy concept, eh? A game where you have to throw petrol bombs through the window of MacDonalds to win. Very ideologically unsound. Still, that's what you must have to do, or else why would they call the game Diner Blaster?

What? Oh, it's Dyna Blaster. So no MacDonalds then? No petrol bombs? Thank goodness for that. Mind you, it still involves a rather unhealthy obsession with exploding devices. And killing your friends. But, hey, it's all for entertainment.

The basic concept behind Dyna Blaster is a simple one. You've got to run around a maze, blowing your way through the walls and trying to kill the other players. Also out for your blood are some squishy alien things who stop you from just hiding in a corner until it's all over.

Along the way you can collect power-ups to give you more bombs and bigger explosions, and even mystery bonuses that can either help or hinder you, depending on how lucky you are. Like I said, simple but bloody good fun.

Now if you're the sort of person who has no friends at all, Dyna Blaster may not be quite as appealing. You see, for the best effect, you really need as many players as possible. The game comes with a special dongle that plugs into your serial port. As well as acting as copy protection, it also allows an extra two joysticks to be plugged in.

Add another player on the keyboard and you've got simultaneous five player mayhem. On your own though, you have to play the computer and it's just not the same. Serves you right for being unpopular. Ha ha ha ha. Ahem.

Before getting into all the wanton violence and exploding people, you must define the terms of victory. For instance, if you want a quick game then the first player to win a round is the overall champion. If you want a more prolonged contest then the first one to score five victories is the overall champ.

So, with that relatively easy choice out of the way it's into the game proper. And blimey, it's a corker. Dyna Blaster is just one of those games that grabs you by the trousers and forces you to play it over and over again.

Friendships are shattered into pieces as previously civilised human beings wrench their joysticks into unnatural shapes and howl obscenities at each other. Some will choose to keep themselves to themselves and try and stay alive that way, others will charge around the screen dropping bombs everywhere and generally scaring the more timid players.



House by Barrett. Pricey number, apparently

In short, it's an incredibly involving game. I'd even go as far as to say that this is the sort of game that you could suggest playing at a party and not get beaten up by your mates.

"Hey everyone, let's play on my computer!"
"Shut up you boring get. Nobody plays on computers at parties."
"But I've got Dyna Blaster!"
"Oh right. Me first."
"Sod off, that's the best joystick!"
"How come I always end up using the keyboard?"
"Aaaargh, you got me."
"Get the one in red. He's got the biggest explosions."
"Why isn't my joystick working?"

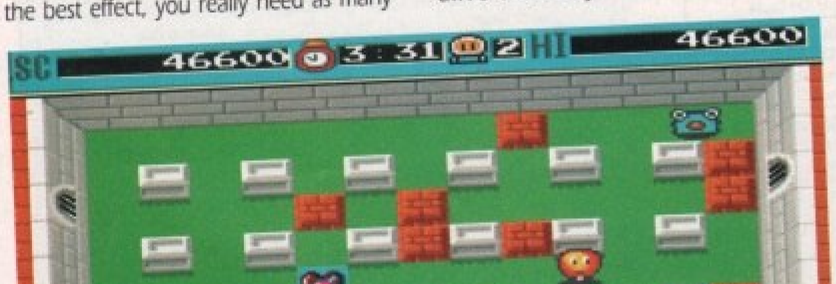
And so on. It really is a communal sort of game. Just don't play it with anyone who's bigger than you, or you'll probably get beaten up quite a lot.

The graphics are smooth and quite cartoony, with your little bomber men looking for all the world like Lego men in space helmets. The sound consists of a bouncy tune and – absolutely essential in this game – beefy explosions.

In the end though, it's playability that counts, and Dyna Blaster has got so much playability it's got huge crates of the stuff filling up giant warehouses. If playability was loaves of bread, then Dyna Blaster would be Warburtons.

Bribe them, beg them, sell them your family but somehow get your mates round with some joysticks and revel in the sheer gorgeousness that is Dyna Blaster.

Daniel



It may look like a simple game but it's hideously addictive

VISION — 4/5
Cute, colourful sprites, but more varied screen layouts in multi-player mode wouldn't have gone amiss.

AUDIO — 4/5
A suitable tune, and those all-important explosion noises add "oomph" to the game.

PLAYABILITY — 5/5
Sometimes five out of five just isn't enough. Single players may feel a bit neglected, though.

ADDICTION — 5/5
For as long as you've got friends, you'll be playing this on a Saturday afternoon.

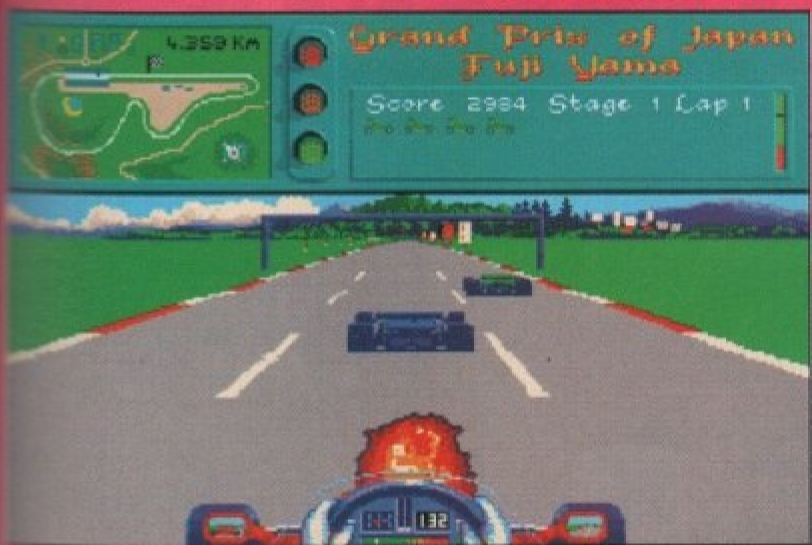
92%

Speed Demon

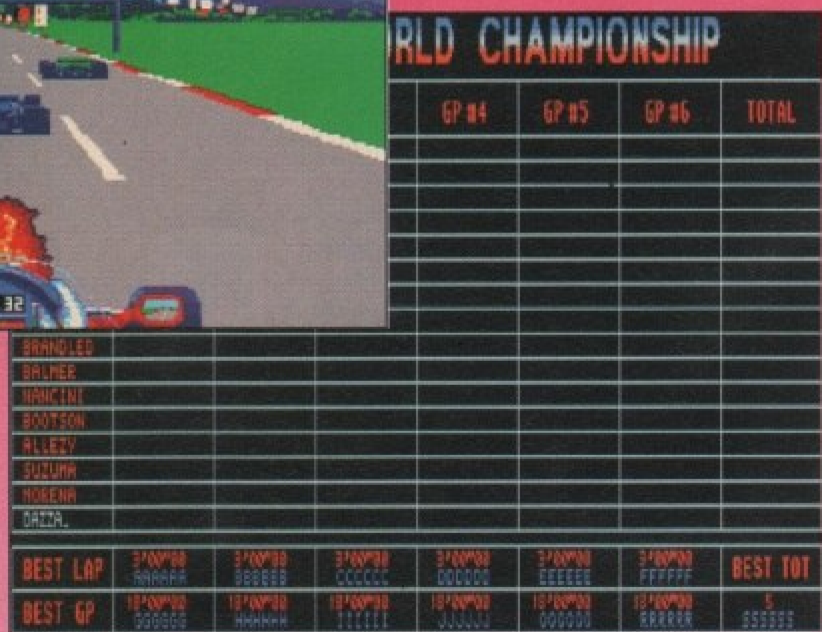
VROOM

LANKHOR ▪ £25.99 ▪ ½ meg ▪ Mouse/joystick ▪ Out now

GAMER GOLD



Erm, can somebody tell me why there is a large ball of flame issuing from my car? (Yer engine's blown up, you pillock! – Ed)



The results screen showing your opponents' results and yours, including the best lap time

I've never really liked driving games, but maybe that's because the only ones that I've had a go at have been utter tripe with jerky graphics and awful controls. However, what do you think has transpired? Yes, I can honestly say that I've seen the light.

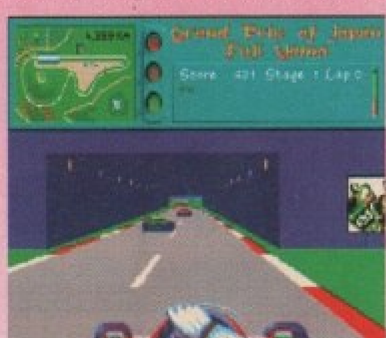
Vroom has to be the coolest, bestest four-wheeled fun I have had in many a millennia. The most notable features are the smooth and ultra-fast graphics and the realistic sounds. As you hurtle around the six available circuits, the engine sound changes pitch with each gear change and acceleration and, with practice, the sound of the engine will tell you when to change gear without having to look at the rev counter.

Even the engine sounds from the other cars rise in pitch as you approach, then fall as you leave them standing. There are tunnels to whizz through on your manic way to victory, which produce a whooshing sound as you go through them, and of course there is the inevitable clang! as you mistime a turn or crash into some Sunday driver.

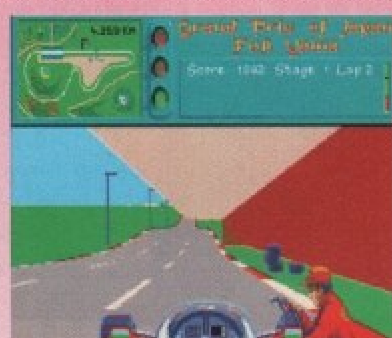
It's not all about keeping on the track though – for instance, you'll have to maintain your tyres should you be too keen on leaving the tarmac to say hello to rapidly oncoming trackside objects.

Each crash will diminish their performance and gripping ability, making those tight turns a nightmare. You also have to keep an eye on your fuel level. To help you with all these problems there's a friendly neighbourhood pit stop. Here you can refuel and replace worn tyres to improve your chances of attaining that number one position. You must also be careful about putting too much strain on the engine. Too many revs or changing down to a lower gear too quickly and the engine will decrease in performance and will eventually blow up.

The control system is pure delight. You can use either a mouse or joystick to weave your way around the track, and very smooth it is too. You will even see the hands on the steering wheel and the front wheels of the racer move in relation to your turns.



Hear the wind whistle as you scream through the tunnels



Four gallons of unleaded please and make it snappy, I'm in kind of a hurry!



On the grid, right at the back due to a poor performance on my part during the qualifying lap

Changing gears is pretty slick too. With a joystick plugged in, you drop down a gear by pulling back and pressing the Fire button. Alternatively, with a mouse the left and right buttons act as up and down gear changes. Pushing forwards on the mouse or joystick increases acceleration.

If you find gear changes too tricky, you have the option of selecting automatic gear changes, but this spoils the fun a little I think. There is a training mode for you to use for practicing and memorising each track, but the ultimate test of your driving skill comes in the racing mode. Here you may enter your name and you are then given a list of the other drivers in the Grand Prix.

The main race is preceded by a qualifying session which will determine your starting position depending on how well you did. You can even save your progress by pressing the function keys.

Yes, I have to admit, I've been converted into a driving freak. I must rush out and apply for a Formula 1 driving licence straight away. If you like the fast lane, then this racey number is for you

Darren

VISION – GGGG – Excellent smooth and fast graphics.

AUDIO – GGGG – Brill and realistic racey noises.

PLAYABILITY – GGGGG – I could play this till the cows came home.

ADDICTION – GGGGG – Almost as addictive as miniature chocolate eggs.

93%

Four that really score

AWARD WINNERS

EMPIRE ▪ £25.99 ▪ ½ meg ▪ Mouse/Joystick ▪ Out now

This compilation from Empire is a collection of four titles – Space Ace, Kick Off 2, Pipe Mania and Populous. All of the games have won some award or other so they should prove excellent value for money. So let's trip down memory lane and check out what made these titles so worthy, shall we?

Darren

Kick Off 2

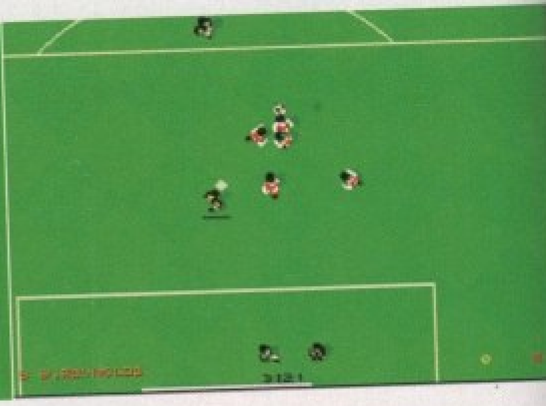
Kick Off was the footie game that set the standard, so when Kick Off 2 was let loose upon those adoring footie fans it was bound to be an award winner. It may not have astounding graphics, but the addiction and gameplay are stupendous.

You can change your team's kit to suit your taste and you can play in the league or the cup. The ball control system is very intuitive and very good – once you master it, that is – and the ability to play set pieces from a foul, along with variable corner-kicking tactics, make it the football fave of all fans.

You can also make substitutions during a match and there is a replay facility to view those scorching goals.

Even the referees have their own personalities. If you enjoy a spot of spherical, leathery object manipulation, then this is the biz.

93%





Space Ace

This game won best animation award back in 1990. The gameplay consisted of controlling Ace, the central character, by various manipulations of the joystick at critical moments. The animation was very impressive, not surprising considering Don Bluth, ex-Disney animator, was responsible.

The sound was pretty cool too, with lots of digitised speech and effects. Some critics termed the game a "joystick controlled demo" but I enjoyed it. One friend of mine even videotaped each portion of the game so his nephew could watch it, just like a cartoon.

It was also one of the most frustrating games I have ever played, and two of my joysticks became airborne, sailing through the ether before encountering my bedroom wall, during a particularly long and frustrating playing session.

90%

Overall rating 90%

Pipemania

I never could get into this game, probably because it is one of those puzzly types that make my head ache so much. You have to score as many points as possible by building a continuous pipeline from randomly offered pipe parts.

To confound matters, you have the flooz to contend with which flows through the pipes shortly after you start. Once the flooz fills a pipe, you cannot remove it and if it spills out of the end of your pipeline, the game ends.

As I said, puzzle games are not something I lunge for on the software shelf, but that isn't to say that this isn't any good. I'm sure those with a taste for the odd puzzle will find this absorbing, but not me. Quick, someone pass the Anadin.

85%







Populous

This was one of my fave games when it was first released, probably because it merged rather nicely with my megalomanic nature. There's nothing more relaxing than having a quiet Sunday afternoon to oneself while terrorising an entire populace, is there?

For those from other worlds who have not heard of this game, it created a whole new genre which was named "God games". There were quite a few imitators which appeared shortly afterwards claiming to be the ultimate God game, but Populous still reigned supreme as far as I was concerned.

Your sole objective as God is to encourage your population to multiply. In so doing you gained more Mana, or power, to enable you to do divine deeds such as bringing havoc to the enemy with catastrophes like earthquakes and floods in an attempt to wipe them out, thereby defeating your opponent god. As far as I'm concerned, this will always be a winner.

96%

It has taken control.
It owns their minds.
It imprisons their bodies.
It even absorbs the building!
It's..

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Defrost



ROGER RA HAIR RAISI

INFOGRAMES ▪ £25.99 ▪

What a sensation that Roger Rabbit film was. Not since, ooh, Bedknobs and Broomsticks had a film so cleverly mixed live action with cartoons. Thoroughly enchanting. And what a whopping pile of crap the original Roger Rabbit game was. Absolutely abysmal. Still, times change, and now Roger's back thanks to Infogrames' lucrative Disney licence. Has he got any better? Let's find out...

But first, The Plot. Roger has been left in charge of that cute and cuddly Baby Herman while the obligatory cartoon Mommy (well, her legs at least) goes shopping, or something like that.

And, oh calamity, Baby Herman spies a giant bottle of milk on top of a local dairy and shuffles off to get it, just like babies do all the time.

Unfortunately he leaves Roger locked in the house. All you, as Roger, have to do is to figure out how to get out of each room and eventually out of the house and after the wayward tyke.

If you don't get the little bugger back to the house before Mommy returns, then Roger gets sent to the science lab to have shampoo rubbed in his eyes in the name of progress. Needless to say, Roger is a little bit wary of this outcome. So rescuing the tot is top priority.

Well, first impressions. Mind-blowing actually. Once you've spent half your lifetime installing the whole thing to hard disk, that is. But, that wee chore out of the way, the graphics, animation and speech are above and beyond anything I've ever seen on the Amiga.

You know all those fancy adventures on the PC? Well, that's exactly what Hare Raising Havoc is like. Without the adventure bit, if you see what I mean.

Basically, you've got seven levels. Each one is a couple of screens long with various objects and items lurking in the fancy scenery. All you have to do is to figure out how to get Roger out of this scene and into the next.

And usually, it involves the most obscure and outrageous route possible. After all, why bother just climbing out of the window when you can bounce yourself off an ironing board, via the sofa and through the little window over the door?

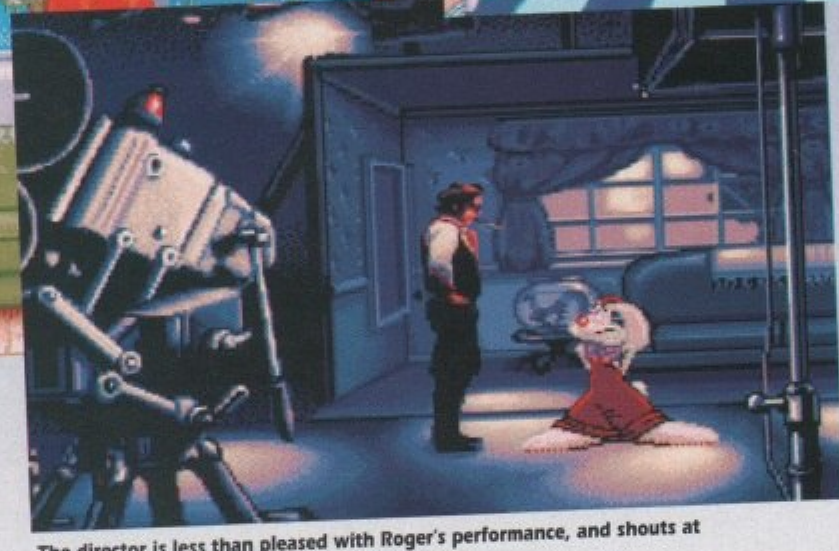
So, don't think logically about things – remember it's Toontown and anything is possible! So, we're all agreed that it looks great, and you'll have to take my word for it that it sounds brilliant as well.



Looks like the fish hasn't been fed for a while



I know I put that nutritious frozen spaghetti Bolognese meal for one in here somewhere



The director is less than pleased with Roger's performance, and shouts at him in a strange Bavarian accent. And why not?



RABBIT IN … SING HAVOC



H… drive only ▪ Joystick ▪ Out now

but how does it play? I don't think we need be reminded of just how crap games with amazing graphics tend to be, do we? Dragon's Lair? Space Ace? Nice to look at but about as playable as a stringless guitar.

Thankfully, Roger doesn't suffer quite as badly as those aforementioned cock-ups, but even so it's not quite everything it could've been.

The trouble is that with so many sounds and animations clogging up the memory, there's very little room for a proper game. It's great fun for the first few hours, but once you've got each scene sussed it becomes a bit of a chore having to go through the same routine every time you play, just to get to a new level.

The good point of the game, besides the spanky presentation, is that it's ideal for kids. It's the same price as most other games, rather than masquerading under an inflated price tag to justify the graphics, and youngsters will be spellbound by it.

It's also fairly easy to get in to, so they should be able to proceed without too much help. Of course, it does need a hard drive to run which will put it out of reach for a lot of people, but if you do have a hard drive with a spare 2Mb on it then this could keep the sprogs happy for a good long while.

For the rest of us though, it's a nice attempt. It looks and sounds brilliant, it even plays quite well, but at the end of the day there's very little substance to the game. It does promise bigger and better things from the Disney licence though. One to show off with, but not much else I'm afraid.

Daniel

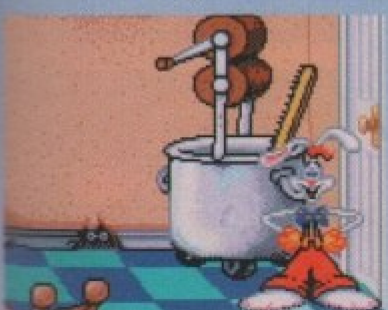
VISION GGG
The best graphics yet, truly brilliant.

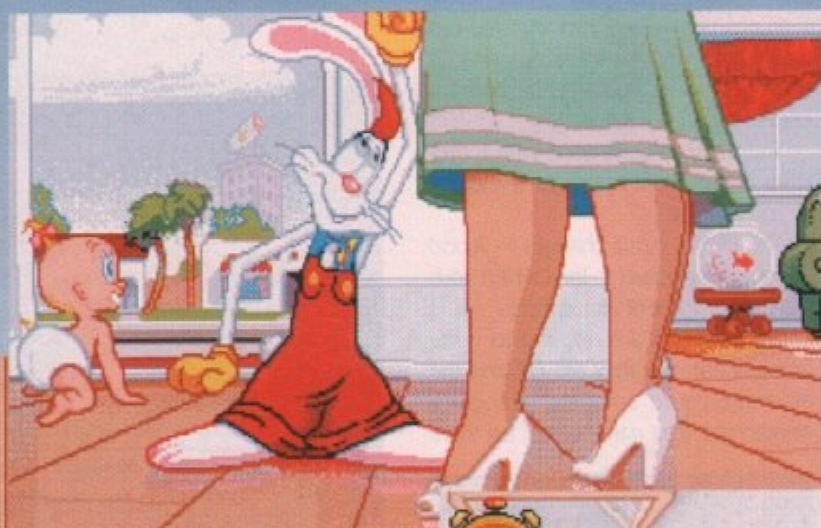
AUDIO GGG
Incredible speech, music and sound effects.

PLAYABILITY GGG
Unlike some graphical bonanzas, there is a game here.

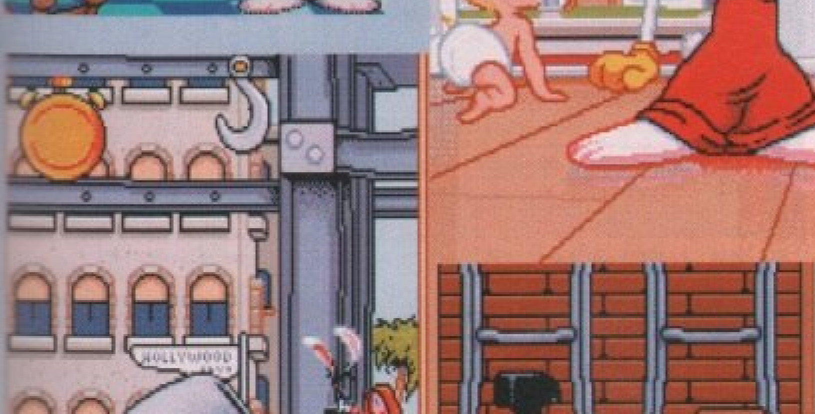
ADDICTION GG
Trial and error should lead to eventual success.

75%

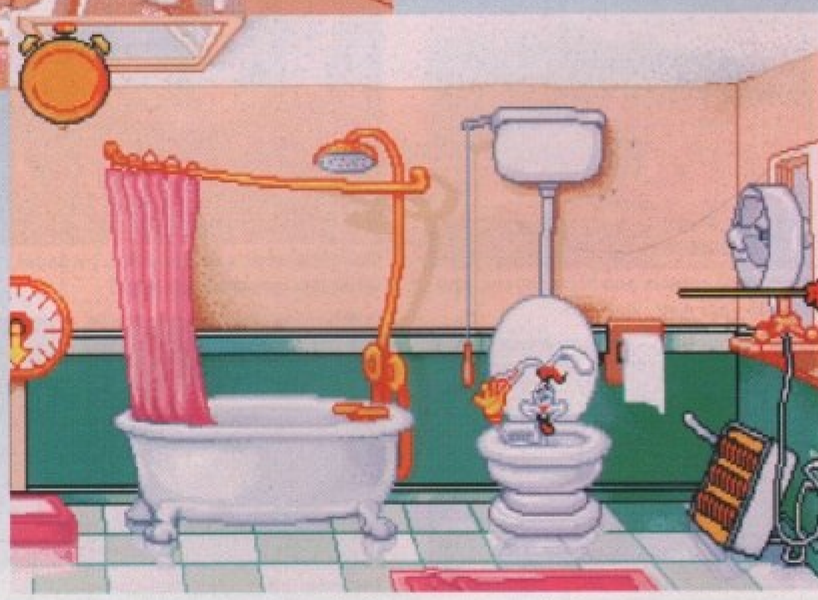




I can see right up your nose from here



Jessica Rabbit pops up to console a slightly battered Roger



A bit of toilet humour

Borobodur – made-up name or wot?

BOROBODUR

THALAMUS • £25.99 • 1/2 meg • Joystick • Out now

Where do they get these silly names for games from? Borobodur. It kind of rolls off your tongue right onto the floor, doesn't it? Anyhow, regardless of the silly name, Borobodur is very similar to Turrican and has a certain Shadow of the Beast feel to it too.

At the start of the game you run around, big gun in hand, shooting everything that moves, but you also have little puzzle elements where you have to activate levers and other objects.

For instance, there is a wheel with a rope threaded through it that that is attached to a door below. You have to activate this wheel to open the door allowing you to pass through. There are also numerous levers to pull, and you have to work out what they all do.

With the many nasties intent on smashing your face in, there are also power-up type objects to collect that restore your energy and increase your weapon power.

The objective is to solve the level whereby you get the message "The exit is open" or something along those lines. You must then make your way to this exit which takes you on to the next level.

Level two is, to all intents and purposes, a driving game. It has all the feel of games like Lotus Turbo, with undulating tracks and twisting corners.

The graphics in this part of the game are quite fast and smooth, and you can even blast opponents with your cannon should they get in your way .

You are apparently not in a car, but on what looks like a floating chair which hovers above the track. You must collect fuel and other objects dotted along the track as you drive along, to aid you later on. There is also a boost function available which, on pressing the spacebar, sends you hurtling around the track at breakneck speed.

Later levels take place in some kind of underground area where you must solve puzzles to progress further. There is an obscure piece of rock that you can move, but I couldn't figure out what to do with at all. Maybe that's because I'm crap at this sort of game.

The sound is quite good with a constant background theme tune playing as you kick butt.

The theme music changes in mood as you go from level to level which adds a certain amount of atmosphere.

The graphics are nothing to write home about, but they are OK and the animation and scrolling are quite smooth too. The game comes on three disks and there's an optional intro. There is also a rather cool Terminator-type opening sequence, with the letters of the title scrolling across the screen to a snazzy tune.

I quite enjoyed playing Borobodur, even though it's nothing new or innovative, so I think those of you who like Turrican should take a look at it.

Darren



Would you mind taking a step back, please? Your breath stinks

VISION

GGG

Adequate piccies but your jaw won't hit the floor at the sight of them.

AUDIO

GGG

Rather good soundtrack as you play, with mood-changing tunes as you progress.

PLAYABILITY

GGG

Quite playable with its mix of puzzle solving and beating the crap out of meanies.

ADDICTION

GG

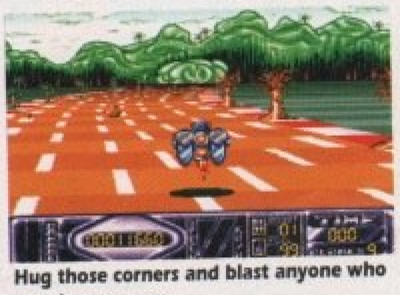
It doesn't make me want to get up early to have another go, but as good as similar games.

74%



I say, that's a rather large laser bolt that's about to hit m.....phzzzzzt POOF!


I'd change your barber if I were you, matey!


Hug those corners and blast anyone who gets in your way


Ooooooh what a creepy place. I wonder what this movable rock is for?


Excuse me, could you tell me the way to get off this level please?

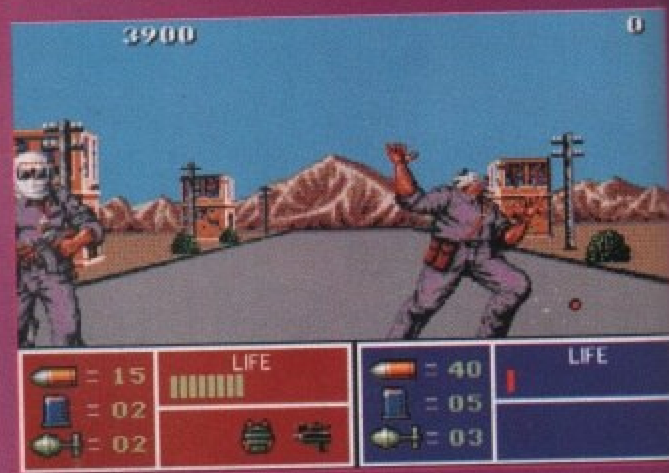

I wonder what this power-up will do? I think I'll pick it up then beat the crap out of that wimpy looking robot down below

The CHEAP seats

Never being ones to shy away from a gratuitous Wonder Stuff reference, Gamer are proud to present the first in an occasional series of budget round-ups. To keep things fair we stuck a selection of the latest re-releases in a bag and each took four at random to peruse. Also, please note the rather dismal self-portraits which go some way to express our reactions to each game. And try not to laugh.

Dan's selections

Operation Thunderbolt
THE HIT SQUAD • £7.99



To be honest I was never a big fan of this Oppo Wolf sequel when it first came out. There always seemed to be too much going on, and the fact that you had to pick up the gun-sight to see where to fire didn't help matters.

Thankfully, time has mellowed me a bit and I actually found myself getting quite into this old chestnut. It's still almost frighteningly difficult to progress any further than level three, but the thunderous sound effects and the polished graphics go together to create a slick exercise in designer violence.

Perhaps too hard for its own good, but at under a tenner it's perfect for relieving those violent outbursts.



82%

Mystical
ACTION SIXTEEN • £9.99



What is it about YTS trainee magicians, eh? They always cock up in a major league way. Via some unforeseen magical boo-boo, this one managed to scatter his master's potions and scrolls all over the shop.

What all this boils down to is a vertically scrolling shoot-'em-up, albeit one with brilliant cartoon graphics. Each time you pick up a scroll or potion you can either stick it in your pouch or use it yourself to give you a new kind of weapon. And a mate can join in as a Golem and can leap around squashing enemies while you get on with collecting potions. Again, it's very entertaining.

The main problem is that once you've got over the novelty of all the weird effects of your spells, it's just another shoot-'em-up. At a budget price you could do a lot worse, but it's not that amazing in the long term.



72%

Toyota Celica GT Rally
GBH • £7.99



A crumbly old driving sim from 1990, this one. And it's a bit of an embarrassment as well, seeing as it's from Gremlin. You'd think that of all people Gremlin could produce a stonking rally game. Unfortunately, not in this case.

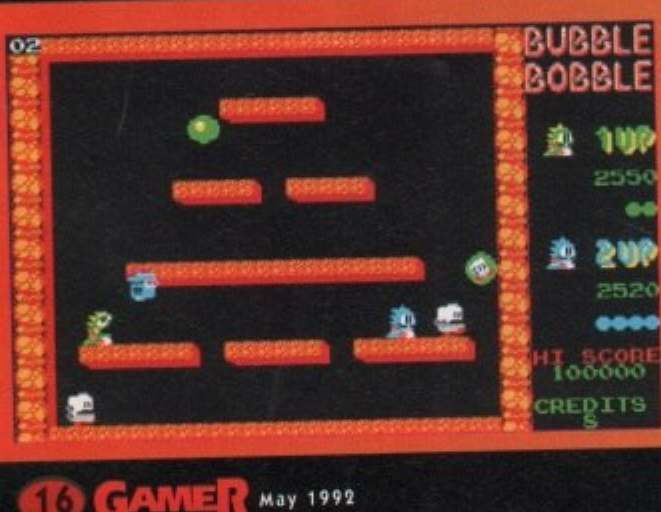
In my humble opinion, GT Rally is terminally crap. There's no illusion of speed at all and trying to keep the car going in a straight line is like trying to get hold of the soap in the bath. Even though there are realistic features like windscreen wipers, they put you off more than anything and tend to obscure your vision.

Poor controls and a complete lack of any sense of competition make this one of the worst driving games I've seen. It may be cheap but it's also fairly nasty. Avoid.

39%



Bubble Bobble
THE HIT SQUAD • £7.99



This is more like it. This is what budget re-releases should be about. Classic games for pocket money prices. And believe you me, Bubble Bobble is a bloody classic and a half.

From this one game came every single cute platform game ever. It's excellent. Even though it's since been overshadowed by its more famous sequel, Rainbow Islands (also due out on budget soon), it's still one of the finest platform games in the universe.

Best with two players, this is a simple and effective game that no self-respecting games player should be without. At this price it's the bargain of the century. Snap it up. Nuff said.



91%

Daz's selections

F-16 Combat Pilot
ACTION SIXTEEN • £9.99



This game won the best flight sim award back in 1990, but it is more of a shoot-'em-up than an attempt at a realistic representation of a fighter aircraft. The game features five missions. If you successfully complete each mission, you have the option of attempting the strategic campaign in which you have to destroy a major part of the enemy installations and aircraft in order to force him to surrender.

The necessity to complete all five missions before you are allowed to attempt the campaign mission makes Combat Pilot quite addictive, unlike some other flight sims which are just a series of unconnected battles. The graphics are quite good and the speed at which they move is good too.

There is also the option of playing against a friend in a head-to-head confrontation, using a null modem cable. I can't remember why I didn't buy this when it first came out – it's rather spiffing.

93%



Combo Racer
GBH • £7.99



It's time to strap on the leather (oooer) and step into an odd-looking motorbike that requires another person on the back for balance because it's crap at going round corners.

Now I'm not really keen on driving games, but I have to admit I rather liked Combo Racer, the sidecar racing game from Gremlin. The sound effects are better than average – for instance, as you enter a tunnel the engine noise echoes around as you pass through. The graphics are OK, but the motion of the track could have been a little smoother. There is a two-player option which involves a friend acting as the guy on the back making sure you don't flip as you slam the bike round those tight corners.

There are eight tracks for you to race around and if that isn't enough, there's a built-in track editor so you can design your own. A decent buy.

85%



Venus the Flytrap
GBH • £7.99



In an attempt to restore the ecological balance after wiping out the entire insect population, scientists decided to create a race of robotic insects. Only they kind of buggered up the DNA and now these insects have turned into a swarm of psychopathic killers, intent on destroying all life.

Humanity's only hope is to create the bane of all swarms of psychopathic killers, Venus the Flytrap – a robot designed to seek out and destroy the rogue insects.

The graphics in VTF are slick with good animation and sound. Your objective is to kill everything that moves and you have lots of weapons to collect to help you on your merry way. These weapons range from mortars to four-way shots.

There are lots of bonuses to collect, such as extra time and shields, and you will need to use them wisely to overcome the hordes of different insects intent on destroying you.

Yet another good value for money game from GBH.

90%



Renegade
THE HIT SQUAD • £7.99



This game seemed to take longer than average to load, and considering I'd not seen it before, I presumed it was because the animation was going to be quite good. How wrong I was! I've seen better animation from a stuffed parrot.

The graphics are not even well drawn. They look not too dissimilar to those you find on a Spectrum. The gameplay is, er, missing completely and I personally don't think it's worth £7.99.

The plot centres around the fact that you are on you way to meet your girlfriend, but the route to her is not exactly free of trouble. You step off the train and set off on your way only to find every thug and villain in the entire universe has decided to congregate on the very streets that lie between you and your girl.

There had to be one bad apple in the bunch, and they don't come much worse than this. You could find better games written in Basic, so avoid this like the plague.

25%



The CHEAP seats

Biffa's selections

Ultimate Golf
GBH GOLD ■ £9.99

This golf game first teed off in 1989 – you'll probably remember that it was called Greg Norman's Ultimate Golf way back then.

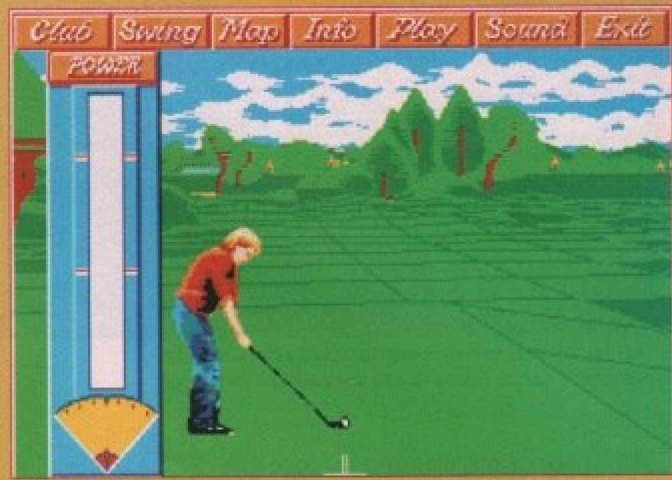
It was meant to be the most accurate golf simulation yet, a golf game to seriously challenge the superlative Leaderboard. Features included practice, matchplay and strokeplay, and coupled with the various ball effect variables such as weather and wind. It really was the golf game of that time.

Unfortunately, Ultimate Golf hasn't matured with age – in fact it looks quite sad when compared to modern day golf games such as Microprose Golf. Graphically it's not bad, but it's not that playable.

If you fancy a trip down Memory Lane and you're a bit short of the old wonga, then Ultimate Golf might be worth a good look.



70%



James Pond
GBH ■ £7.99



The world's greatest underwater agent is back, and this time he'll cost you a mere £7.99. What a bargain! You are a little fishy, the underwater kingdom's answer to Roger Moore.

You have twelve missions to complete. The first is to free the lobsters using keys that are dotted around the playing area. The game has wonderful graphics, stunning animation and great sound, and more importantly the playability is fantastic.

There aren't really enough words to describe how good James Pond actually is – well there are, it's just that I haven't got enough space to write them all down. One of the greatest games released in 1990 and it still hasn't lost any of its character two years later.

If you've got Robocod (the sequel to James Pond) and haven't got James Pond then I order you to go out and buy this immediately without any delay. A great game.



91%

Voodoo Nightmare
GBH ■ £7.99

You take on the role of Boots Barker in his perilous attempt to escape the jungles of darkest Africa.

The game is set in the 3D isometric mould. I have now read the instructions five times and I still can't work out what to do. All I know is that you have to find some magic pins that have pierced a voodoo doll.

How you get these pins I haven't a clue – I ran around for ages, couldn't find anything of interest and then turned the computer off. The only thing I did notice was that the jungle had some very dangerous animals living in it.

The graphics aren't that bad, but the game itself is quite frustrating and involves a lot of aimless wandering around. Overall, Voodoo Nightmare should only be bought if you're suffering from budgetitis and simply have to have every single budget game out.



38%



Sir Fred
ACTION SIXTEEN ■ £9.99



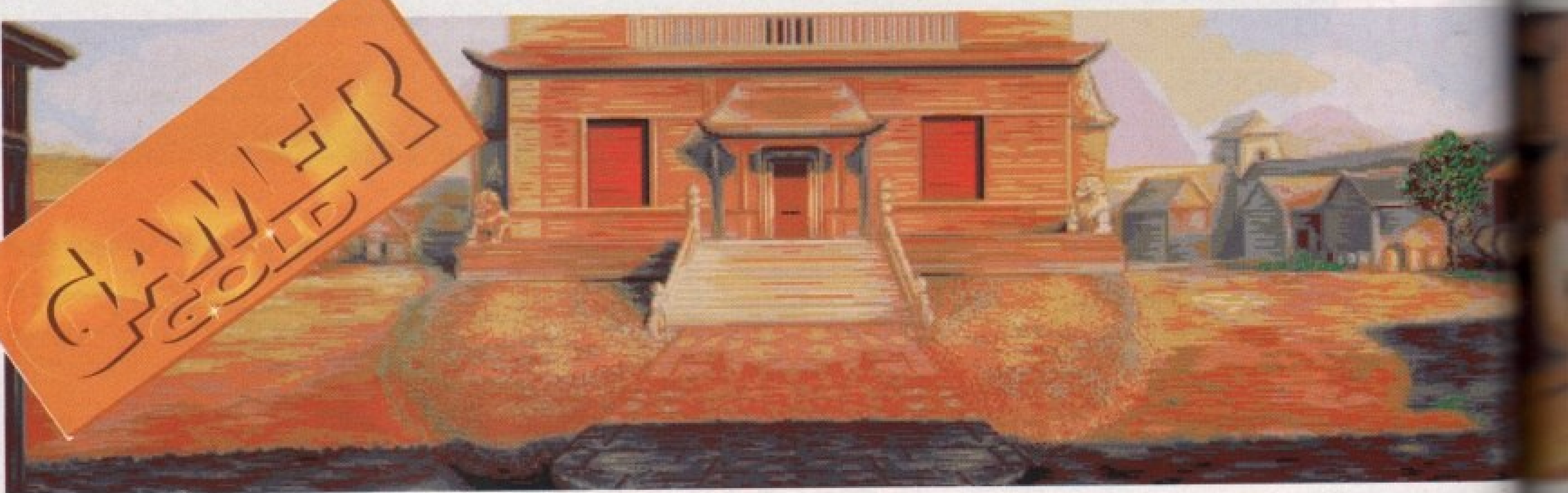
Graced with strength and bravery, our hero Sir Fred won the heart of a beautiful damsel (the lucky bugger). In doing so he brought on the wrath of the evil dwarf Ultimor who got really angry and out of spite turned Fred into a vulnerable dwarf. In his quest to break the evil curse, Sir Fred must go and find Ultimor to beat the crap out of him.

The graphics in Sir Fred are quite amazing. There are wonderful backdrops, great animation and it all left me quite speechless. I can't seem to remember this game when it first came out, so I was well impressed when I loaded it up for the first time. It has a enjoyable little intro and some of the enemies are really quite cute, especially the tiny gnome with a swinging mace.

Sir Fred is an enjoyable little romp around and is well worth a look at. I liked it, and so will you unless you don't like gnomes.



85%



This highly desirable property located in the Chengdu mountains comes with a handy tank parked to the rear...

Excitement and adventure to take away

HEART OF

DYNAMIX ▪ £34.99 ▪ 1 meg ▪ Mouse ▪ Out now

It's been a long time since my buck was swashed, I can tell you. Yes indeed, missus. In fact, I think it's safe to say that the last game that even made my swash feel remotely bucked up was Monkey Island. And that was ages and ages ago.

So as you can imagine, my swash and buckle were both feeling a little bit down in the dumps. I tried to cheer them up. Y'know, get them swashing and bucking again. I watched all the Indiana Jones films, I even watched loads of those stupid black-and-white cliff-hanger Republic serials, but to no avail. My swash was all bucked out and my buck was swashless.

So it was a great boost to my ailing adrenalin glands to receive Heart of China. My swash and buckle perked right up. You see, Heart of China is set in the 1930s. And it's all about rescuing a damsel in distress from a ruthless warlord. And it's got ninjas. And tanks, planes and trains. And all the characters are digitised from real life actors.

And for once, it's a game that's as good as it sounds. Swashbuckling and buckleswashing all over the place, I promise you.

It all starts when the ever-lovely Nurse Kate Lomax is kidnapped while doing lots of great work for charidee, by fiendish and thoroughly booworthy warlord Li Deng. Kate's dad and all-round beastly property baron, one Mr Eugene Adolphous Lomax III, gets a bit narked by this and so decides to force "Lucky" Jake Masters to rescue her.

Jake's our hero, a down-on-his-luck fly boy, and he also owes Eugene loads of dosh. And just to make sure that Jake doesn't refuse this mission, Eugene blows up Jake's house boat. Fair enough.

Thus, Jake finds himself scouring the streets and bars of Hong Kong for the last remaining ninja master, Zhao Chi. Only Chi can guide Jake to Li Deng's fortress, and besides, it's always handy to have a ninja close to hand in a scrap. And here we must jump into Jake's shoes and find the ninja, rescue the dame, kill the bad guys and survive till the end credits.

The action is controlled in true graphic adventure-style, by using the mouse pointer to explore your surroundings and select various actions. And the interface used in Heart of China is excellent. Although at first glance it seems a bit daunting, and unfortunately the manual doesn't make it sound any easier, you soon get the hang of it.

The good thing about this all-new control system is that it allows you to check out each location just by moving the pointer over anything that looks interesting, and so you can immediately get an idea of what options are open to you. This is because as the pointer moves over something of note, the pointer changes to show you what you can do with it. So over a person it becomes a speech icon, over a door it becomes an exit sign and so on. It means that you'll never be sitting around wondering which things you can interact with and which are scenery. Which is rather nice isn't it?

And for all the complete thickies out there in Complete Thickieland the manual rather helpfully contains a step by step guide to the first few puzzles and tasks, including how to find Chi and convince him to join you.

This should help even the most clueless player get the hang of things and set off on their own, and of course, for the clever-dicks, you can just try it without any help. And you deserve everything you get. Smarty boots.

So, this Heart of China lark, what's it like, eh? Well, unless you're blind – in which case you'll probably have



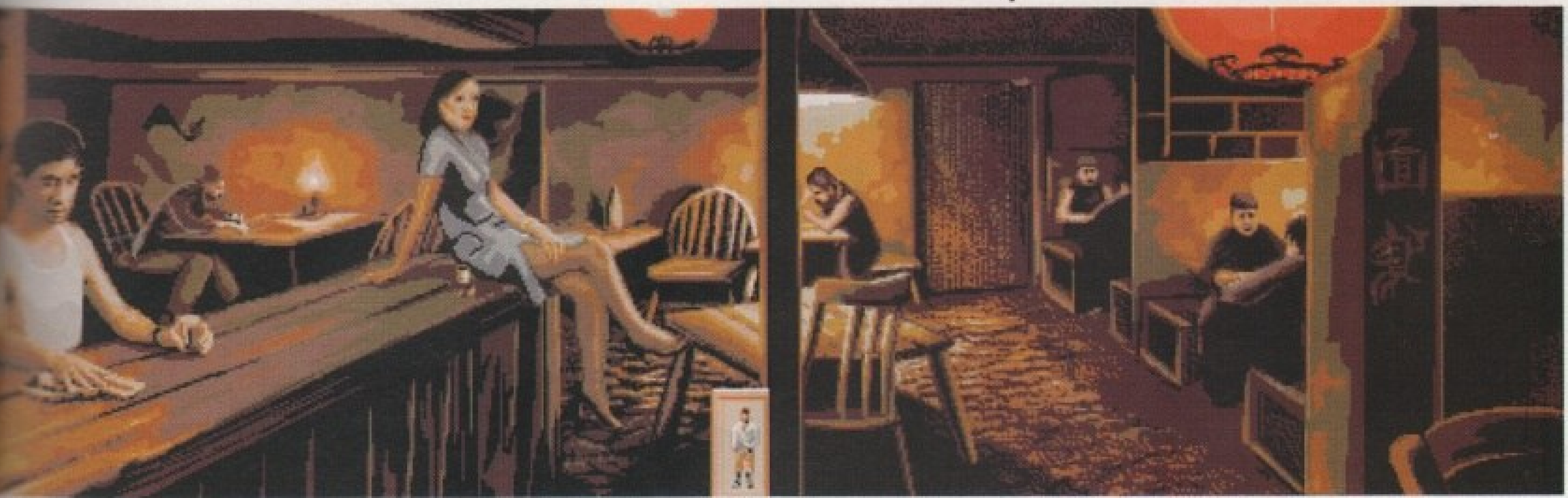
Well, there's a novel way of sneaking into a fortress



How dare you talk about my wife like that? Under the fighting tree, right now



How has Chi managed to conceal a grappling hook in his ninja pyjamas? Trust me, you don't want to know..



Hello barman, give me several large flagons of your finest booze, please

CHINA

trouble reading this anyway – you'll already have noticed that there's a whopping Gamer Gold plastered somewhere around here. And that might give you a clue as to what I think of this game. I like it, in case you hadn't guessed.

The graphics are stunning. Lush, colourful backgrounds are populated with digitised actors, who have been retouched to they blend in with the backgrounds – even if Jake still bears an uncanny resemblance to Kurt Russell.

This inspired blending of real people and hi-res backgrounds gives the game a wonderfully rich feel, and adds no end to the all-important atmosphere.

To add to the sheer glossiness of it all, a lot of the scenes are animated with people walking about and so on, which takes this from being your standard "clicking on a pretty picture" adventure to being an "interactive movie-type experience sort of thing". A big thumbs up for the way the game looks, then.

Soundwise, you get plenty of oriental mood music, although sound effects are fairly thin on the ground. Ultimately, the music is just there to give your ears something to do, and it helps to cement the atmosphere already created by the graphics. And let's face it, if you did have loads of FX the game would probably just slow down to a crawl, and nobody wants that, now do we?

In the end though, it's the variety that keeps you glued. Even once you've rescued Kate, that's only part of the game. You'll have to go on to adventures in Istanbul, Katmandu and even on the Orient Express before your quest is completed.

At least if the manual's to be believed. Plus! There are arcade sequences including a tank simulation and a fist fight on top of a speeding train. Blimey. Thank God for the Save Game feature, eh?

Now, put on your serious hats while we try and find something to moan about (Quick head scratching session). OK, the biggest grumble I can come up with is that the whole caboodle comes on a mammoth nine disks. Nine disks!

You can play it from floppy, but be prepared to swap until you're blue in the wrist. Hard drive installation is best as it speeds things right up, but then not everybody has a hard drive do they?

So, the price for such a huge game is that the box weighs a ton due to the piles of disks inside. And you'll probably spend more time swapping disks than playing the game if you aren't blessed with a hard drive.

All in all, Heart of China is one helluva game. It's big beyond the boundaries of conventional bigness and it



looks and plays like a rather wonderful dream. A definite "must buy" for hard drive owners, and a worthwhile purchase for the more patient floppy drive users. Get out there and swash with your buckle until it drops off.

Daniel



Now, who would live in a house loik this? (Er, it's Li Deng actually – Lloyd Grossman)



Jake Masters! You dirty little peeping tom...

VISION GGGGG
Clear instruments, reasonable screen updates.

AUDIO GGGG
Just what can you do with a jet?

PLAYABILITY GGGGG
Play? Grrrr.

ADDICTION GGGGG
Like the real thing, long trips can be tedious.

93%

know games • know HMV

talking shop

GAMER

ELSPA Chart

Fourteen new entries this month, five climbers, ten games fall and there is one mysterious non–mover. This is actually Formula One Grand Prix and it remains in pole position.

A big shock this month was Populous 2 falling an enormous 18 places from number six to number 24. The reason for this drastic drop is the plethora of new budget games released. I told you never to feed them after midnight, and look at them, all 33 of them. It's disgraceful! Come on you Amiga owners – get those well-earned readies spent on some decent games.

This even caused my excellent tip for the top, Another World, to not even enter the top 30. I believe it's hanging around at the 40 mark, but it's still my tip for the number one spot.

Good news for all you flight sim fans – A320 Airbus has landed the number six spot and our stewardess-loving news editor John Butters firmly predicts that it'll be number one next month. Hmm, we shall.

According to several chart sources, Harlequin and Abandoned Places are doing well in the lower half of the top 100 and are almost certain to be in the top 30 next month.

That's all we have time for, but next month we'll be showing you how to make an egg rack out of a couple of yoghurt pots and a banana skin, and talking about what's going up and down in the world of Amiga games Bye. See ya readers!

Jonathan

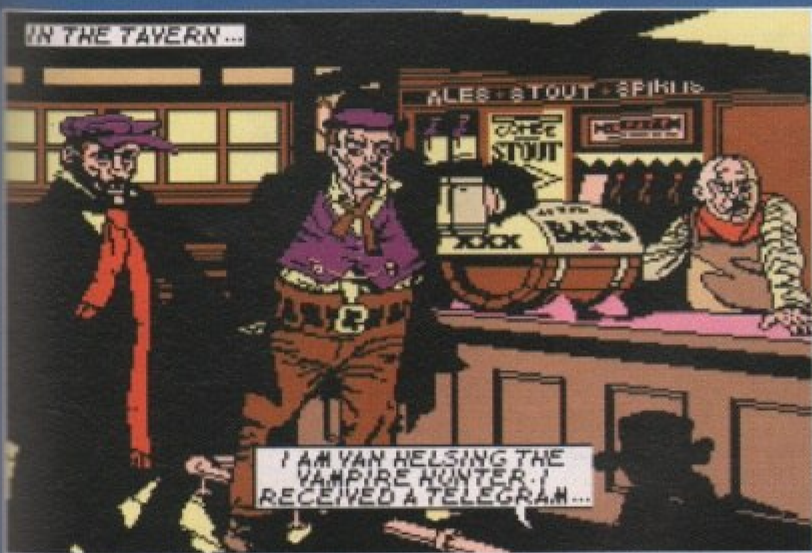
Talking Shop is sponsored by HMV and features a software chart compiled by Gallup Ltd. This chart is the copyright of the European Leisure Software Publishers Association

THIS MONTH	Move	LAST MONTH	Title	Publisher	Price
1	↔	1	Formula One Grand Prix	Microprose	£34.99
2	↑	N	F16 Combat Pilot	Action 16	£9.99
3	↑	NE	James Pond	GBH	£7.99
4	↑	11	First Division Manager	Code Masters	£7.99
5	↑	9	Scooby Doo and Scrappy Doo	Hitec Software	£7.99
6	↑	NE	A320 Airbus	Thalion	£35.99
7	↑	10	Jimmy White's Whirlwind Snooker	Virgin	£29.99
8	↑	NE	Toyota Celica Rally	GBH	£7.99
9	↓	3	Birds of Prey	Electronic Arts	£34.99
10	↓	4	Robocop 3	Ocean	£25.99
11	↓	2	WWF Wrestlemania	Ocean	£25.99
12	↓	5	James Pond 2 – Robocod	Millennium	£25.99
13	↑	N	Italia '90	Tronix	£9.99
14	↑	19	Wacky Races	Hitec Software	£7.99
15	↓	12	New Zealand Story	Hit Squad	£7.99
16	↑	NE	Operation Thunderbolt	Hit Squad	£7.99
17	↑	N	Paperboy	Encore	£7.99
18	↑	NE	Giants of Europe	Anco	£7.99
19	↓	17	International Ninja Rabbits	Micro Value	£7.99
20	↑	21	World Cricket	Zeppelin	£7.99
21	↑	NE	Ghouls and Ghosts	Kixx	£7.99
22	↑	NE	Ultimate Golf	GBH Gold	£9.99
23	↔	23	Fantasy World Dizzy	Code Masters	£6.99
24	↓	6	Populous 2	Electronic Arts	£29.99
25	↑	NE	Shadow of the Beast	Sizzlers	£7.99
26	↑	NE	Rainbow Islands	Hit Squad	£7.99
27	↓	25	Batman – The Movie	Hit Squad	£7.99
28	↑	NE	Untouchables	Hit Squad	£7.99
29	↓	24	Dizzy Collection	Code Masters	£24.99
30	↑	NE	Populous	Star Performers	£10.99

Fangs for the mammaries...

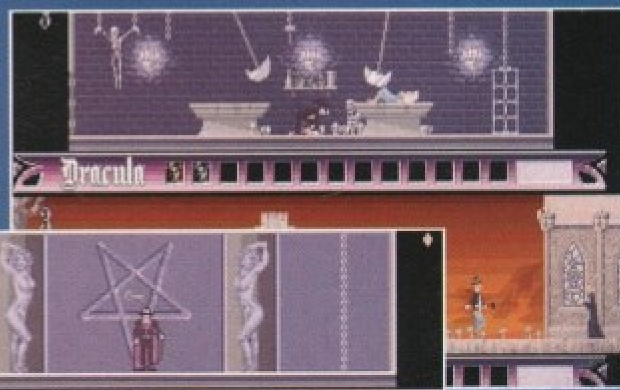
BRIDES OF DRACULA

GONZO GAMES • £24.99 • 1/2 meg • Joystick • Out now



Blimey, Van Helsing sure knows how to make an impression

Oh dear, Drac gets a bit over-enthusiastic with one of the young ladies





Drac pauses for thought in his castle, while Van Helsing finds one of the potential brides

It can't be easy being a vampire. Bad breath, pasty complexion, and you keep biting your tongue. And just think of how hard it must be to get a date. Have you ever tried chatting up a girl when your eyes keep glowing bright red? It's impossible. You can't even get on Blind Date. Imagine it...

Gormless bimbette [reading questions off cue card]: Number two, if you invited me round for lunch, what would we eat and why?

Vampire: Er, well I'd probably bite you on the neck and suck all the blood out of your body, actually. (Audience laugh until their tonsils bleed, Cilla grins sickeningly, LWT commission yet another series, mass suicides ensue).

It just won't work will it? So what can a lonely vamp do on a weekend, eh? Well, ol' Dracula seems to have got the right idea.

Rather than popping down to the youth club disco and trying to wangle a salt and vinegar flavoured snog behind the church hall, he's decided to make all the girls in the village fancy him.

And how does he do this? Does he send off for one of those "Make Yourself Dead Sexy, Honest" sprays from dodgy magazines? Of course not! He stalks through the night, chomps the babes on the neck and turns them into the Brides of Dracula (dan dan diddly daaaaaan).

Naturally, the villagers are a bit narked by this spate of babe thievery, and along comes Van Helsing. Van, or Transit to his friends, is the world's best vampire killer. He's probably the world's only bloody vampire killer, but nevertheless, he's very good at it. Unfortunately, he's managed to scatter his vampire killing kit all across the village (pretty careless, I thought) and so he must find all his bits and pieces before he can nail Drac.

So the race is on – Dracula trying to capture all the luscious young ladies in the village, and "Transit" Van Helsing trying to remember where he's left all his tools of the trade. Arcade adventure time, I guess.

It's a two-player affair, where you each control one of the protagonists. Now in principle this is a great idea, especially if you get to play Dracula, 'cos you get to chase buxom maidens and stuff. Even so, it's basically a run around and collect things game. And it's not a very good one either.

This game first appeared on the, cough, ST way back in 1991. And rather unfortunately for us, there's a quote from a certain sister magazine of ours, Atari ST User, on the box. A whopping 92 per cent it claims. Oh dear.

Maybe it was radically different on the ST, but if it was anything at all like this then the reviewer was either blind, or very, very drunk.

So, Brides of Dracula, prepare yourself for a slagging off of Olympic magnitude. First up, the graphics are tiny and their movement is stilted, so trying to jump over a moving enemy is pretty damn impossible. This doesn't help the gameplay any, and that's a pity 'cos it needs all the help it can get.

The basic idea is a tried and tested one, but it's spoiled by the thoughtless way that each object, be it woman or weapon, must be taken back to your starting point before you can collect another. So back and forth and back and forth you go, until one of you runs out of energy. Wowee.

Unimaginative sound and fairly lame graphics are just the final nails in this game's coffin. Cute idea, but it's neither scary or funny. They might have got away with it if the game had consisted of more than just going through the same screens over and over again, but as it is I don't think that this game's likely to rise from the dead too often. Ho ho ho, I'm a right joker me...

Daniel



Drac auditions for Michael Jackson's Thriller, but Van Helsing has popped up in Shadow of the Beast, for some reason

VISION GGG
Some OK-ish backgrounds but sprite control is well dodgy.

AUDIO GG
Weak tune and no spooky FX. A wasted opportunity.

PLAYABILITY GG
A great idea, but badly implemented.

ADDICTION G
One game should be enough to put you off forever.

31%

AC

Get your baps out for the lads...



ELVIRA



FLAIR ▪ £25.99 ▪ 1 meg ▪ Joystick ▪ Out now



Fyak fyak! Hubba hubba! Oooga booga!



Woweee! Fnaaar fnaaar! Cooor blimey!

Wahey, Elvira's back (and front, ooer) and this time you get to control the well-proportioned beauty around three levels of arcade fun. You may well remember Elvira's first computer game appearance a couple of years ago and you may also remember it was an adventure role-playing game that played rather like Dungeon Master.

What did help the game to become immensely popular was, errr, ummm, Elvira's large chest (I'm not a man to beat around the bush). This important factor, which sold the first game, is also back.

For all the hearty full-blooded males out there it's good news, but for all you feminists it's decidedly bad news. You have to admit that if it wasn't for Elvira, the first game would've more than likely bombed.

Sex sells games. Take Leisure Suit Larry for example – even way back in the depths of time when Barbarian first came out, Maria Whittaker's ample bosoms made the game a top seller.

Anyway, enough of this tittle tattle chittle chattle, on with the review. Elvira was asleep in her home when an almighty storm blew up, rain lashed down upon her house and lightning lit up the sky. The storm was enough to awaken even the dead and that is exactly what it did.

Elvira woke with a start and at the bottom of her bed was a ghostly figure dressed in a highly regal robe. To cut a long story short, this ghostly dude was apparently the King of Transylvania and he said that Elvira could have his castle.

There is only one snag – our busty buxom beauty has to conquer two hostile environments, Arctic Earth and Underworld of Fire, and then conquer the castle itself.

Elvira – The Arcade Game is, you've guessed it, a platform game. Elvira has to walk around collecting spells, runes and weapons to help her conquer the worlds. Also there are all manner of beasties trying to stop our heroine from completing her tasks. Despite having, erm, an ample chest, Elvira is really quite nimble – she can jump from platform to platform with the greatest of ease.

Elvira can also use some spells to good effect. Some give her energy back, while others allow her to walk over hot molten lava and other such improbables.

You encounter an ancient trader in each of the three worlds. The trader has the ability to trade a spell that you have collected for one that he has in his collection. You can also ask him for information to help you solve the quest. The trader can be visited as many times as you like.



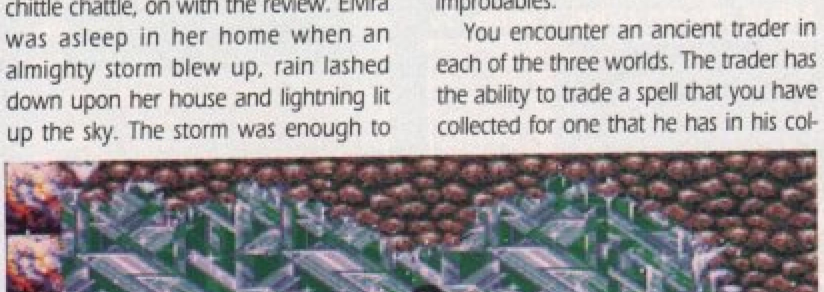
Ber-limey! Gnuk gnuk! arf arf!

Time to wrap up the review, methinks. The first, well OK, the second thing you notice about Elvira is the graphics. They're amazing! One of the most impressive bits is the ice world – it actually snows. I know it doesn't sound good on paper, but you really have to see it to believe it. There is also a nice little intro featuring some digitised pics of the lady herself.

Soundwise, there is an average little tune and the sound effects are nothing to write home to mother about. The game plays alright, but sometimes you get beasties leaping out at you from nowhere and it can be a little frustrating. It's quite difficult, but you get nine lives to play around with. There is a puzzle aspect to the game, but most of these can be worked out easily.

If you are into large-chested, heavy metal-loving women then this game is definitely for you. For the rest of us lesser mortals, you're better off finding something else.

Jonathan



Oooow! Worra beauty! She's virtually naked! (OK, calm down Biff, it's only a game – Ed)

VISION GGGGG
High quality graphics with some great animation.

AUDIO GGG
Average little tune with suitable sound effects.

PLAYABILITY GGG
Can be frustrating when beasties jump out at you from nowhere.

ADDICTION GGG
High difficulty level will give the average gamesplayer a headache.

70%

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12, 24, 36 Hup Hup hup, It's EASN

JOHN MADDE

ELECTRONIC ARTS ▪ £25.99 ▪ ½ meg ▪ Joystick ▪ Out soon

GAMER GOLD



America, land of fast foo[d], drugs, death, violenc[e], George Bush, Micke[y] Mouse, Elvis, Madonna, Pub[lic] Enemy, Bart Simpson and Joh[n] Madden. The question that nee[ds] to be asked is, who the bloop [is] John Madden? I don't know w[ho] the hell he is and I don't rea[lly] care, but here is John Madde[n] Football anyway.

The object of the game is to score more points than your opponent (pretty obvious really). You

VISION

GGGGG

Brilliant graphics with brilliant animation. What more can I say but brilliant.

AUDIO

GGGG

Stonking soundtracks with some nice sound effects in the game.

PLAYABILITY

GGG

It's slightly easy which is the only real disappointment.

ADDICTION

GGGG

The best American Football game on the market and one well worth coming back to.

90%



I know it doesn't look exciting, but wait until the hard-hitting action starts

RESENTS

EN'S FOOTBALL

score by getting a touchdown or by kicking a field goal. To score a touchdown you have to get the ball into your oponent's endzone. It really is a bit complicated to explain the rules, so I'll be basic.

At the start of the game, someone kicks off and the team receive the ball. Then they run with the ball trying to get it in the endzone. If they are tackled then it is a first down. The team has four downs to gain 10 yards – if they are successful then it is another first down. So it progresses until you get into the endzone and score a touchdown. The offensive team can move up the field by throwing the football to one of the receivers. Alternatively the quarterback – the guy who bungs the ball and generally controls play – can hand the ball to one of the running backs, who will try to leg it as far as he can.

Now this sounds all fun and games, but there is the small matter of the defensive team. Their job is to get the ball off you. Now these guys aren't softies and will more than likely break your legs just to get the ball. They can intercept the ball or claim it if it is fumbled, but they can't steal it out of your arms.



After you have scored a touchdown and gained six points, there is an opportunity to kick a field-goal for an extra point. This entails booting the ball over the post, just like they do in rugby.

There are of course loads more rules and regulations, but I haven't got enough space to tell you them all. If you buy John Madden's Football have a look inside the manual, all will be revealed and then you'll be able to find out what Mick Luckhurst was babbling on about.

Now on to the game. It starts with a funky tune and a nice graphical introduction – it even features one of those American commentators who introduces you to the game.

Once past the copy protection, it's time to select what type of game you want to play. You can play a regular game with two of your favourite teams or you can start a playoff series where you choose your team and you play until you get knocked out or until you win the Superbowl.

You can play on joystick or keyboard, against the computer or a friend. There are other choices to be made, like whether you want to play indoors, or outdoors in the rain – you can even play in the snow. Once you've selected all your options, it's time to kick off.

During the game, you have to select plays. These determine whether you are to kick, throw or pass the ball, or whether you are to launch a full-scale attack on your opponents. They can be a little confusing at first, but the more you play the more you learn.

Overall, John Madden's Football is the best American Football game on the Amiga. The graphics are brilliant and you can hardly tell the difference between the Amiga and Sega Megadrive versions. The players are well animated and all the teams seem to have their team colours.



The Megadrive has three different Fire buttons compared to the Amiga's one, but the Amiga version still plays fairly well. On the sound front, there is the stonking intro tune and there is even a "mix" of the original Megadrive music before you begin the game.

While you are playing there are some good sound effects like the "Hup hup Hup" before the ball is in play and loads of bone-crunching tackle noises.

There are a couple of slight problems. The first one is that it's rather easy. Whether it's just because I'm amazing at John Madden's and can beat all the others in the office or because I've had loads of practice playing the Megadrive version, I don't know, but it is still easy. The other problem is that it slows down in parts and always seems as though the other team is much faster than you. Apart from that, once you've mastered the control system it's great fun to play, especially when you score that all-important first touchdown.

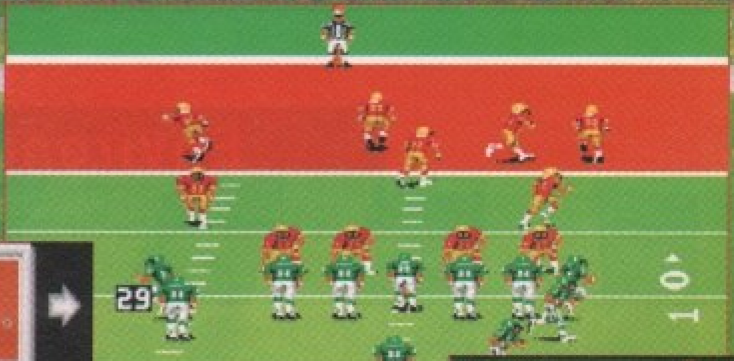


You just can't help jumping out of your seat and bopping to the touchdown tune. What I am disappointed about is the distinct lack of beautiful cheer-leaders. Oh well, you can't have it all.

If you are a fan of American Football (as I am) then this game will definitely be at the top of your shopping list.

Don't forget – once you've bought the game, go round to your Megadrive-owning chums' houses and say "anything you can do, we can do just the same". That'll get them riled.

Jonathan



Euuuggghhh! All right, own up, who's let one drop?

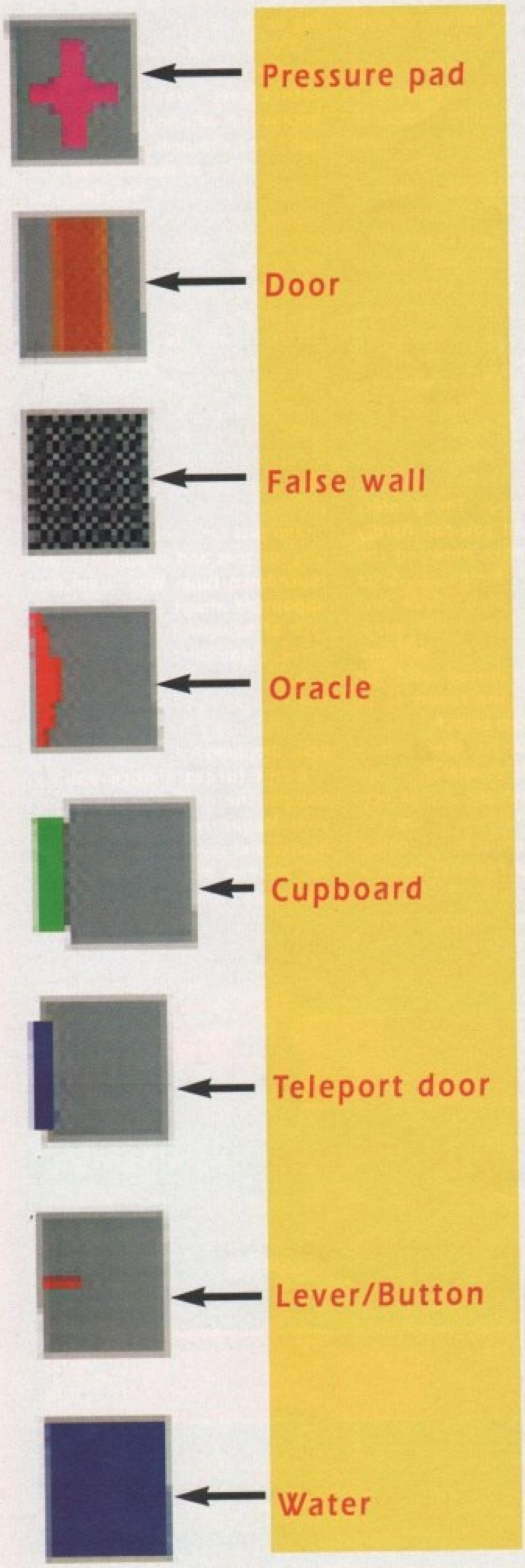


Wow, it's the interesting playbook bit



There's the pass, where's the touchdown?

Cheat Mode



Getting started and staying alive in Knightmare

For all you peeps who are struggling to get started in this DM clone, here are some tips that I employ when playing the game. Being the thoroughly thoughtful person that I am, I've even included a partial map I did during the quest for the shield.

If you haven't found the quest entrance yet (are you sure this is the game for you?) just find the stick and throw it at the tree who says I've lost my child.

Hand to hand combat

Set up your party appropriately. I've seen some players with their Wizard at the front of the party while in combat, which is a sure way to send him to oblivion. Make sure your strongest members are at the front.

When you encounter a monster, never, never stand still and fight it – lead it to a room where you can run around it while hacking away.

I set up my computer so that I have one hand on the numeric keypad for movement and the other hand on the mouse, which is positioned over the weapons ready to strike.

It takes a little practice to become acquainted with sidestepping and turning on the spot without having to glance at the keypad, but once you have mastered it, you can keep your eye on the screen at all times while moving around.

Forget about the movement icons – they will slow you down in combat. Most of the monsters are very slow, so you can easily outmanoeuvre them to hit them from the side or from behind. If you are the cowardly type, though, you could always lead the monster back to a room which you can then lock him/her/it in, but this doesn't exactly bump up your experience points.

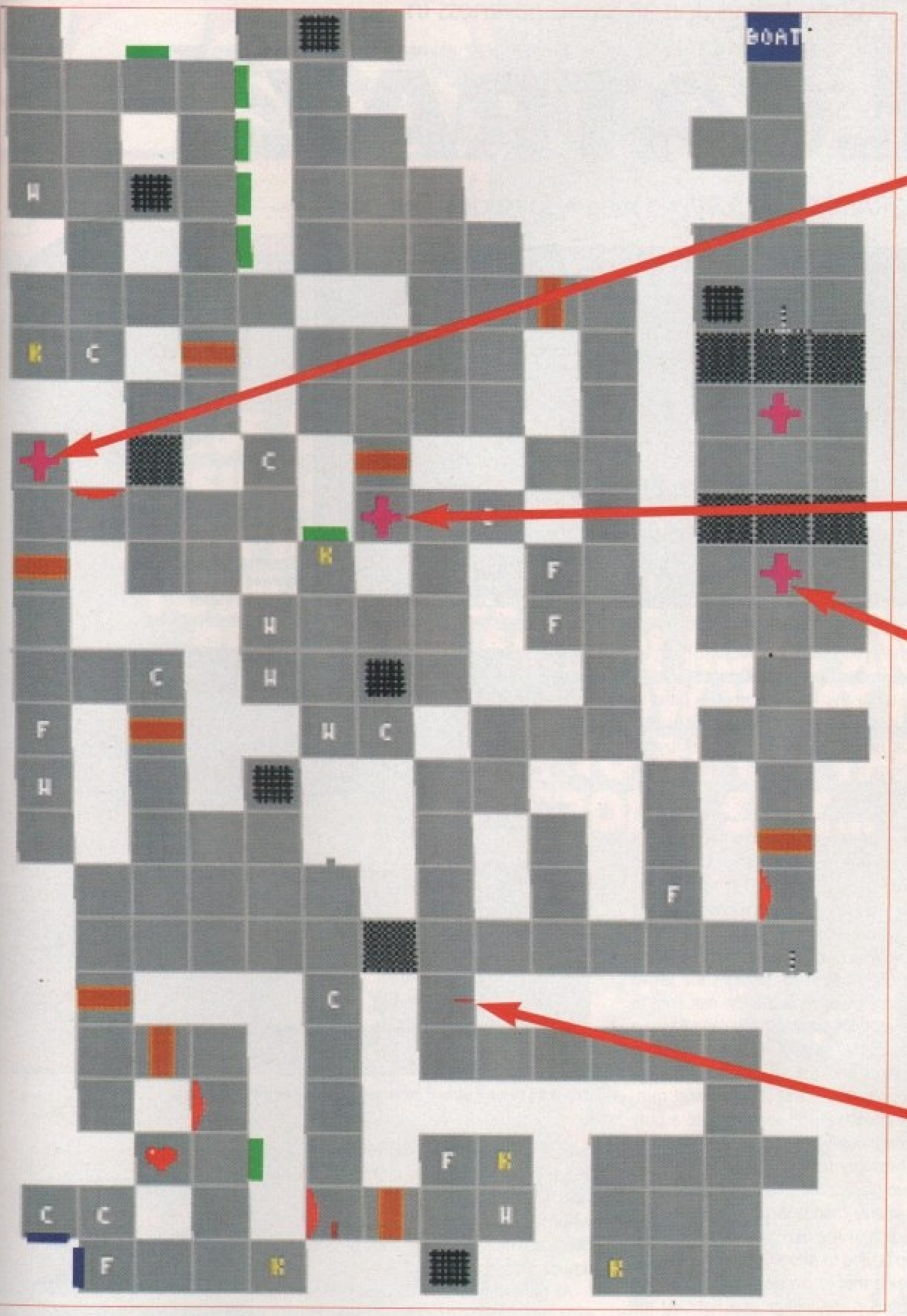
Environmental damage

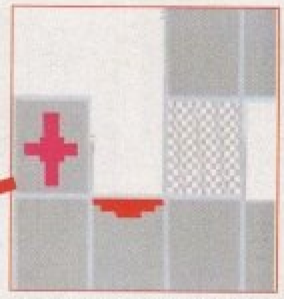
Use your environment to your advantage. Lead monsters to doorways and then close the door on the suckers while hitting them. Also, some of the traps you encounter can become quite devastating weapons for you to use.

Take the short hallway with a hole and a lever at either end. The oracle says don't play with fire, and when you pull the lever, a fireball is shot from the hole – perfect for luring monsters to and letting them follow you down the hall while you pull the lever to unleash the fireball onto them. Be careful not to get hit yourself by pulling the lever once they are dead, though.

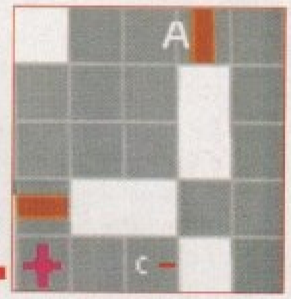
If you look at the map near this hallway, you will see a section of the wall is marked as false. Later on, when you are on the other side, you will find a button on a wall (see Figure I) which, when pressed, will remove that section and provide you with a shortcut to the fireball hall.

You will find this extremely useful later on because when you enter the sewer area, you will encounter quite a few monsters in groups of four. They can take a fair time to kill normally, so just entice them to follow you and show them your new-found fireball trick.

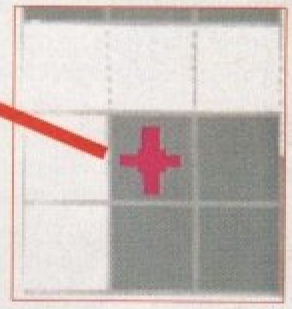




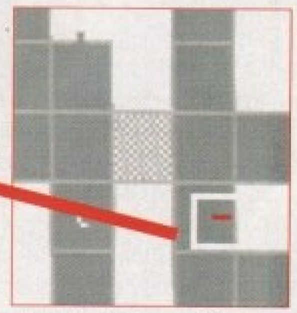
Put a useless item on this pressure pad and the shaded wall will stay open



Stepping on the pressure pad will open and close the door marked A



When you stand on this pad, the wall will disappear revealing a larger room. There will be a group of monsters here that are hard to kill, so lead them back to the fireball hall to deal with them



Push the button and the shaded wall will disappear allowing access to fireball hall

Mapping

The best way to map an area is to ignore any doors or switches you come across until you have been in every nook and cranny of the area you are in. When you have mapped out the current area, go to the nearest door and start mapping the newly uncovered area from there.

The worst thing to do is to just blindly go around going through every door you see. This only enlarges the area you have to map and will lead to you getting lost.



Spells

When it comes to healing the wounded, you must have your cleric below the character icon of the character you wish to cast the heal spell on. To be able to heal the cleric, you must have a bottle in the other hand of the cleric, then cast one of the healing spells. The bottle will fill with the appropriate spell and the cleric can then drink from it.

Guns, knives and all round nastiness in

ALCATRAZ

INFOGRAMES ▪ £25.99 ▪ ½ meg ▪ Joystick ▪ Out now

Somebody in this game hasn't quite got the right idea. Your average law breaker tends to steer clear of prisons in general. Criminals and prison cells. It's a bad combination.

But our Mr Big Baddie in this game has seen fit to break into a prison. Not out of prison like any normal, balanced public enemy, but into one. Alcatraz, strangely enough.

Lucky for him that Alcatraz was deserted or he would've looked a proper charlie. So now he's running his drug cartel from within the fortified walls.

Obviously, this sort of disregard for common sense can't go unquestioned. This being the case, some blokes in suits decide that some blokes in combat trousers should sneak into the prison and shoot the bad guy. Democracy, eh?

The blokes in combat trousers, who are also lumbered with the rather crap names of Fist and Bird, are then dumped in a dinghy and given a hearty shove in the general direction of Alcatraz.

And when they finally drift ashore on Alcatraz Island, they find themselves armed only with nine throwing knives each. This is so they can infiltrate the prison without making too much noise. Unfortunately, as soon as any of the guards spot them, they let rip with guns, grenades and flame throwers, thus spoiling the surprise somewhat. Ho hum.

Anyway, with all hell breaking loose, our two heroes must battle their way to various buildings in the Alcatraz complex and either nick evidence or blow them up. These sections are played in 3D, rather than the horizontal scrolling of the rest of the game, presumably to add to the atmosphere. Alcatraz, it must be said, bears an almost uncanny resemblance to Hostages. This isn't surprising





The sergeant always insisted on showing his home videos...

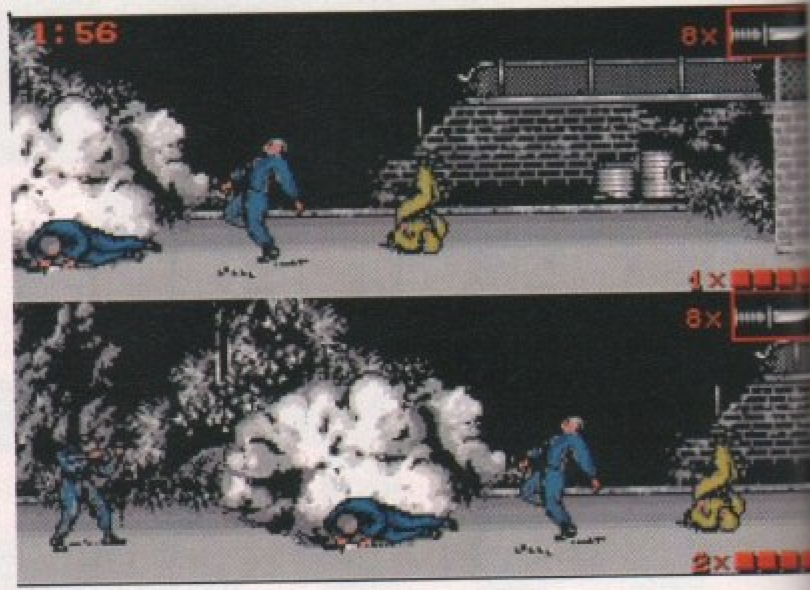
when you realise that Alcatraz is, to all intents and purposes, Hostages 2.

While this is undoubtedly a bit of a plus, seeing as how Hostages was and still is a stonking little game, it also brings to light the bad points in Alcatraz.

You see, Alcatraz looks a hell of a lot like all the different sections in Hostages, but played in a different order. You've got the left to right bit, the 3D walk-around-and-shoot-baddies bit, and the "too bloody hard for its own good" abseiling bit.

But whereas in Hostages the left to right bit was a pain in the rear end, in Alcatraz it's excellent. You can pick up a variety of weapons from downed guards and use them yourself. This, coupled with the screams and gunshots, makes this section quite a tasty little shoot-'em-up.

Its only real let downs are that the two player sprites are identical and you can only change weapons when you're hiding in the background, so you end up having to dodge behind doors while being shot to pieces, which is a bit of a chore in the middle of a fight. At the



The drug dealers turned Alcatraz into an all night discotheque

end of each scrolly bit there's one of those "important" buildings where you switch to 3D. And true to Sod's law, whereas this was the best bit of Hostages, in Alcatraz it's a bit of a let down.

All the meaty weapons you collected outside are useless indoors, and well, let's be honest, RoboCop 3 did this tons better. What should have been the best section just feels a bit flat I'm afraid.

I can't comment on the abseiling bit as I've yet to find anybody who can actually do it. But it's probably like it was in Hostages – a tricky bit that you have to do to get to the next shooting match.

As a whole, Alcatraz is an improvement on Hostages. The simultaneous two-player option means that you can run around and shoot people with your mate, and teamwork is absolutely essential to success.

The scrolly shooty bits are absolutely brilliant, and the 3D bits are not quite as good, but still fun. All in all, a reet groovy little blaster and one that should keep you happy on a wet weekend. Well worth a look.

Daniel



Fred wished he'd booked into a better hotel...

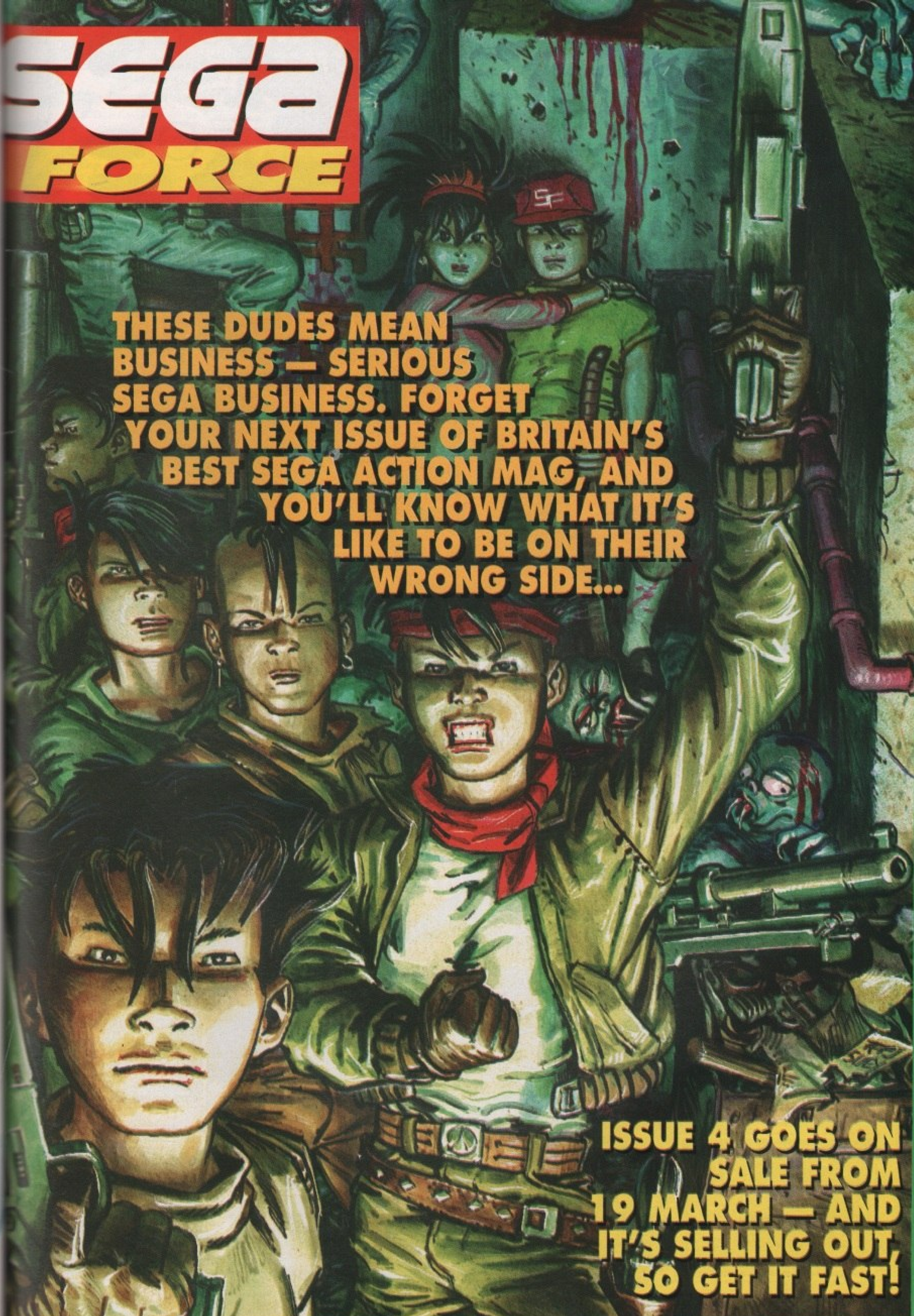
VISION – 4/5
Not quite as good as it could have been, but still a "looker".

AUDIO – 4/5
Spooky tune and satisfying screams and explosions.

PLAYABILITY – 4/5
Two-player action gives it added "fun factor". Whatever that is.

ADDICTION – 4/5
Not too hard and not too easy. You'll come back to it for more.

81%


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From the simplest public domain effort to the most sophisticated, semi-DTP high-end package, wordprocessors start with the assumption that you want type in documents, process them with the computer and then output them in an acceptable finished form.

The features you will require to help you do this vary according to how you wish to use the package – writing letters and constructing a novel are two very different tasks, and you should choose a program which reflects what you require – and what you can afford.

This article consists of reviews of all the main packages, followed by a comprehensive table detailing the various features and capabilities of the programs reviewed. It will give you an overview of a very crowded market, and help you to decide exactly which program matches your needs, at your budget level.

Wordworth

If William Wordsworth was alive today, would he use an Amiga and a copy of Wordworth to pen his particular brand of prose? No, not if he had any sense. Or to quantify that, no, not unless he had a 2Mb Amiga, a hard drive, and as an optional extra, an accelerator card.

Wordworth is supplied on four disks and comes with a large and detailed manual. The program has to be installed to floppy or hard drive, so in the case of floppies, with the addition of a documents disk, that's five blank disks you need to start – unless you have a hard drive, which is recommended.

There's a hard drive install program supplied that quickly sets the system up for use. Wordworth works in a similar manner to most Workbench 2-compliant applications, so the scroll bars on its windows have gadgets on the bottom rather than at the top and bottom.

The display can either be medium or high resolution, if you have a flicker fixer for the latter option, and presents a central writing area with pull-down menus along the top and the most commonly accessed items such as justification, line spacing, typeface and colour control as icons down the side.

This is wysiwyg, which is useful considering the different types of font that Wordworth can use. There are Workbench fonts, four enhanced Wordworth fonts, plus standard fonts, Colourfonts and Compugraphics outline fonts – if you have Workbench 2. That's a hell of a lot of different types.

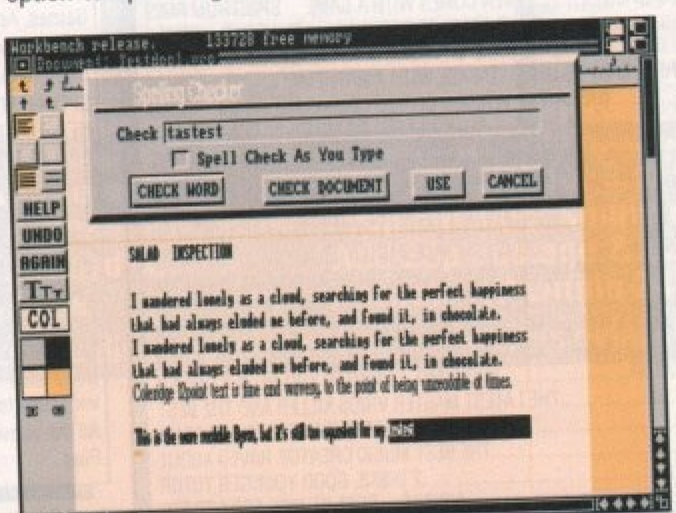
The impressive thing is you can mix and match them onscreen, however you choose. Add a picture import facility, where you can resize the image, and have text flow around either the whole block, or an object, and you have an almost DTP approach to wordprocessing.

There is a drawback to this wanton use of style, and that's memory. You need one meg to start with, but that's only good for about 1,000 words, especially if you use more than one typeface. You can have 120k of Chip RAM left, but there's little free Fast RAM, and it runs out fairly quickly. To include graphics you'll need at least 1.5 to 2Mb of RAM. Workbench is closed automatically to save memory, but if you have some to spare there's an option to open it again. One annoying aspect of the program is the flickery screen and slow updating.

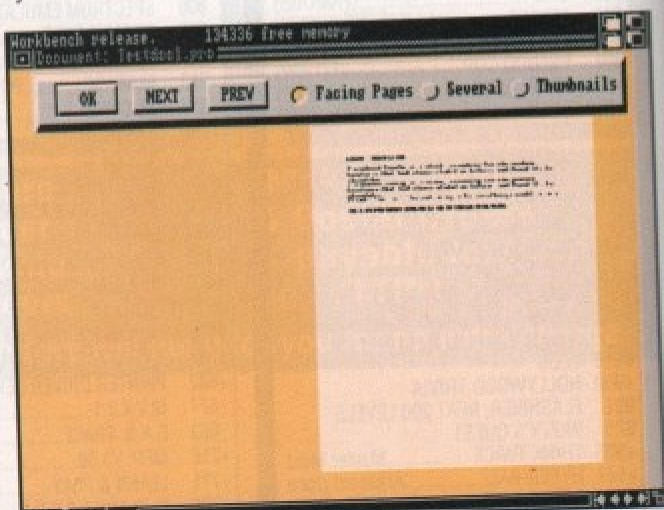
Surprisingly there's a quick screen option which eliminates virtually all of this, and the text scrolling speed remains quick, making editing a pleasure.

Besides the excellent font and printer support, Wordworth has a couple of other strong points. There's a 110,000 word English dictionary and a 30,000 word thesaurus courtesy of Collins, very good file support for other WPs and applications (you can save or read ProText or WordPerfect files for example), and up to 100 files can be open – if you have the memory – at once.

Wordworth is a very strong, flexible and powerful graphical wordprocessor. It excels in a number of areas, and is weak in none, making it a leading contender in the WP market.



Wordworth's spelling checker contains a massive 110,000 words



Print preview lets you see your document as it will appear in print

Protext

Version 5.5 of Protext has gradually evolved from a PC, blank edit screen and command line text editor that was very fast, to today's all-new version, which is far more user friendly, yet retains the brute force text-crunching aspects.

To say the old Protext was not easy to use is an understatement. The latest ver-

Software

Scribble

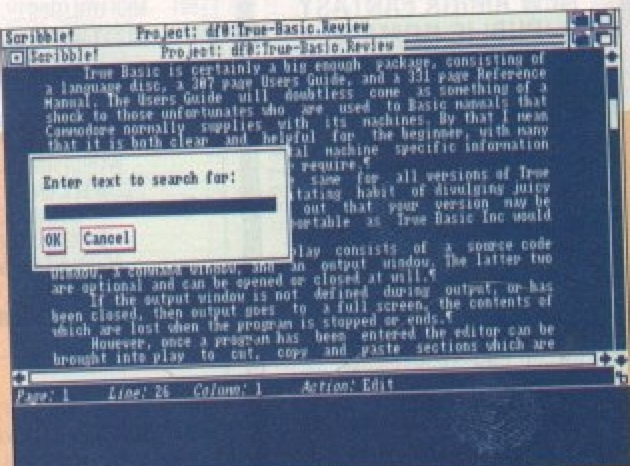
Is there anyone in Amiga land who has never seen Scribble, with its flowery icon and – let's be honest – rather uninspiring interface? Scribble was one of the very first WPs for the Amiga, and even in its latest incarnation, that age shows.

Still, you can open and edit four files at once and it does contain enough minimum features to satisfy the infrequent prose merchant. No obvious clues as to what's going on distract the eye around the bland Scribble editing screen – all functions have to be pulled down from the menus.

So it's cheapish, but Scribble does boast spell checking, a word count, cut/copy and paste for shuffling blocks of text around in an easy manner, and user-defined line spacing.

Formatting text options are fairly rudimentary, mind you. It's either right, justified or nothing, and there are no headers or footers. It isn't wysiwyg, but there is a preview mode which shows the file with the formatting, line spacing and text effect options included, so there's little chance of being surprised by the output.

Scribble isn't complex, but it does contain just enough of everything to make life easy for the casual letter writer. If that's all you need then why bother paying over a £100 for features you'll never use?



Scribble's rather uninspiring interface

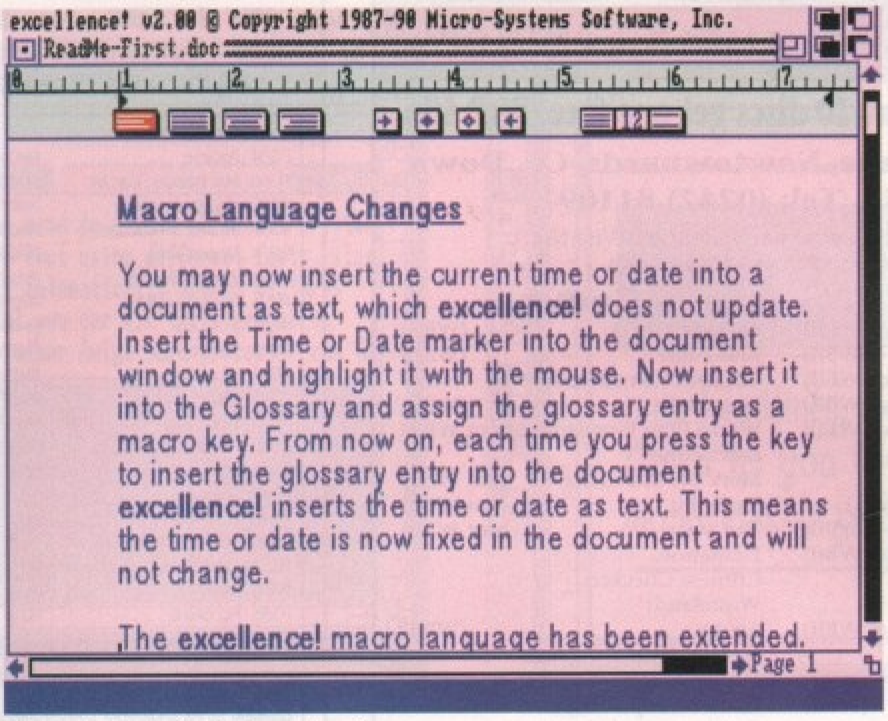
sion, supplied on four disks and with one large manual and three small ones, has done much to soften its image, yet certain aspects still require a trip to the help file or manual.

For a start, the editing window is resizeable and the program runs under Workbench. There are a host of features accessible from the pull-down menus, so many in fact that they almost reach the bottom of the screen. Colours are not, however, changeable, which means you are stuck with any combination of the standard four WB colours.

When you first install Protext on either floppies or hard drive, a configuration program is run offering the choice to assign icons to files (generally a good idea), change the colours, and install a printer from a large range of common models. At last a driver for the Citizen Swift 24 is included as well. The config program can be run again on its own to change these defaults.

Back on the editing front Protext is fast, and made quicker by the ability to jump the cursor around the page and the document. A rather strange feature is the ability to automatically put line numbers in your text, presumably so that you can save Ascii as a listing for use in a programming language.

While editing is now much friendlier, and at last the word count and the option to select new printer drivers are on menus, there's still one noticeable omission. If you want a spell of double line spacing you need to access the command line and enter the correct code. This is less painful than before for the simple reason that everything that isn't on the menus has its command explained on the help menu.



Clear and pleasing font with excellence!

Still, even with improved disk access, you can only load and save Protext or Ascii files, unlike Wordworth, and there is no support for incorporating graphics, except rudimentary lines. At least you don't get memory warnings half-way through an article though.

Protext also supports a few typefaces (Prestige, Helvetica, Courier and Times) and a range of styles to choose from, including double height text, but otherwise it's paltry compared to Wordworth. Only the basic styles show up onscreen as well, since this is not wysiwyg.

Where Protext does outstrip Wordworth is in its comprehensive mail merge facilities and generally more advanced versions of the same features that both WPs share. I was especially impressed by the table of contents generation, data tables and ability to calculate expressions in the text. It was also nice to see widow control, which stops the odd word being left at the top of a page or column. Pretty sophisticated stuff. Even the word count can analyse the text, and you can count words in a marked block on their own.

The main dictionary is markedly smaller than that supplied with Wordworth – only 70,000 words compared to 110,000 – but its legal and medical supplement wins with 40,000 words to 26,000. There are also quick dictionaries of 5,000 and 500 words for when memory is at a premium.

Protext was a naked brute text cruncher. Now it's almost fully clothed, but underneath the trappings there still beats a mean text word pro'. The presentation still looks crude in places – that's the PC heritage for you – so you can't really recommend it to people as their first WP. Neither is it suited for any type of graphical work. On the other hand, if you need a fast and efficient WP, mail merge or advanced processing features, then this latest version of Protext is way out in front.

excellence!

The first of the American power user WPs got off to a flying start with a self assembly manual, no less than 57 pages of manual corrections (!) and a hard drive installation program that tries to copy the program to the wrong place. Then when running from HD it asks for the one of the original disks to be inserted.

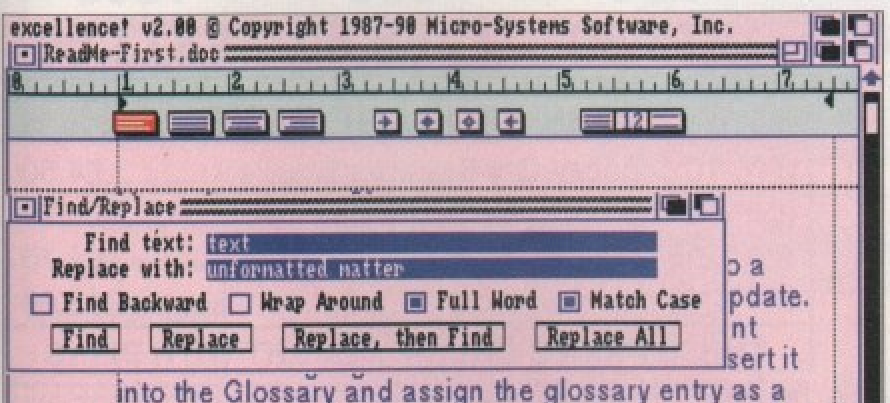
Oh well, once underway excellence! looks, if anything, like a cut-down Wordworth or a tarted up KindWords. It opens its own screen, though Workbench is still accessible, and the editing screen has icons for the most commonly used commands (line spacing and so on) and ruler and paper markers should they be required. Everything else drops down from menus. A nice feature is that you can customise the colour scheme of your 8-colour environment better than any of the other packages.

Once I'd set it up to look nice, the second pleasant surprise was the WPs own fonts. Naturally I had access to all the other fonts from these packages, because they are all installed in your Fonts library, but excellence!'s own fonts were lovely. Ordinary 12-point text was nice and large, rounded, and a delight to read, as opposed to Wordworth's spidery fonts and the infernal engine approach of Protext. These fonts are PostScript, too, so inevitably you can print to a PostScript printer, or – and how handy this is – write a PostScript file to a disk.

The vertical scrolling through the text wasn't very good, though. It's so bad, in fact, that I always went for the mouse and used the scroll bars instead. However, the screen is updated quicker than Wordworth, and there's less of a flickery effect.

The window resizing option is very ➤

scribblings

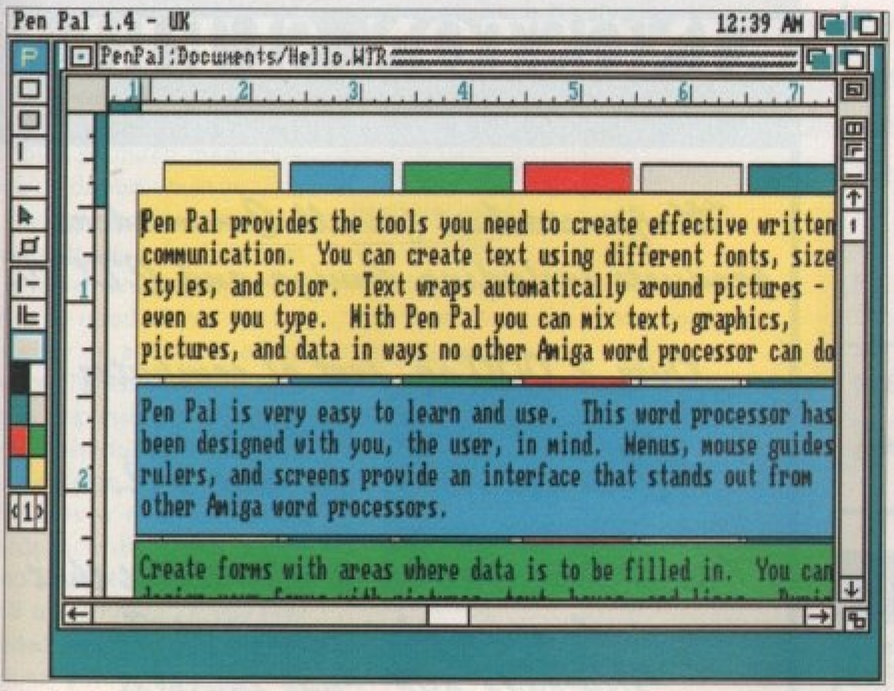


Comprehensive Search/Replace facilities on excellence!

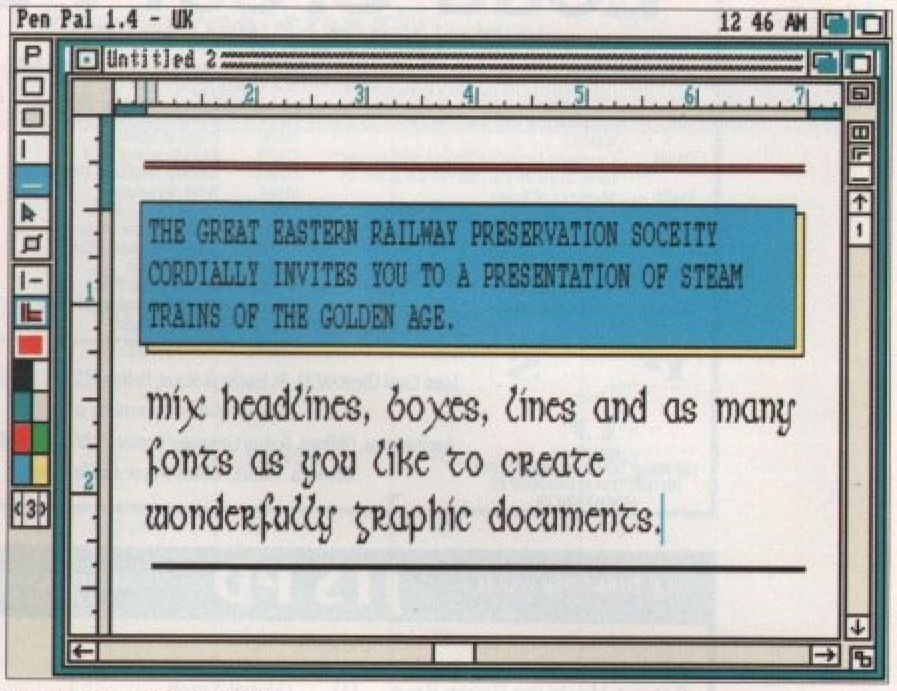
SUPER test

WORDPROCESSORS

Which wordprocessor is right for you? Duncan Evans guides you through all the top packages



Pen Pal's helpful and friendly interface



Stunning fonts, dodgy spelling...

sluggish. You can open more than one file at a time, but memory starts to become scarce when you do. And when it runs out you suddenly find that without warning you can't do things like resize windows, or even save one of those files.

If you close one and free up enough memory you can then save the other one, but obviously this unheralded problem – the program doesn't tell you there is a problem – means you need at least 2Mb of RAM if you're going to edited a couple of files at once, especially if you use graphics.

While the features of excellence! put it firmly in the mid to upper performance category, it does have a couple of advanced features such as Table of Contents entries and a mathematical expression calculator – and some features which are less than useful.

The spell checking, which does boast continuous checking, lacks sophistication, and the ability to import .IFF pictures is marred by the ability to only display up to eight colours in a document. How many eight-colour DPaint pictures do you draw? In fairness, the idea is to provide illustrations rather than to be a DTP package, which it is far from.

The spell checker has a 140,000 dictionary, including all manner of supplements for words you or I will never use, but it is American. A handy feature for the semi-literate is a grammar checking, which is both mildy useful and mildly amusing at times.

A very strange feature of excellence! is that while it can write a form of text to disk, it does not read Ascii properly, but it reads Protext files perfectly! It can read .IFF text though, because that's the format an ordinary Save command stores an excellence! file in.

Despite some grey areas, especially in setting the thing up, and a few faults, there is much to commend excellence!, especially to the more adventurous scribe who wishes to have both a decent writing environment and be able to drop illustrations into not only the main text, but the header/footers as well.

Pen Pal

There are some pieces of software that you loathe the moment you encounter them, and then there are some, such as Pen Pal, that you cannot help but like. I was endeared to the product when I saw the box and then the manual.

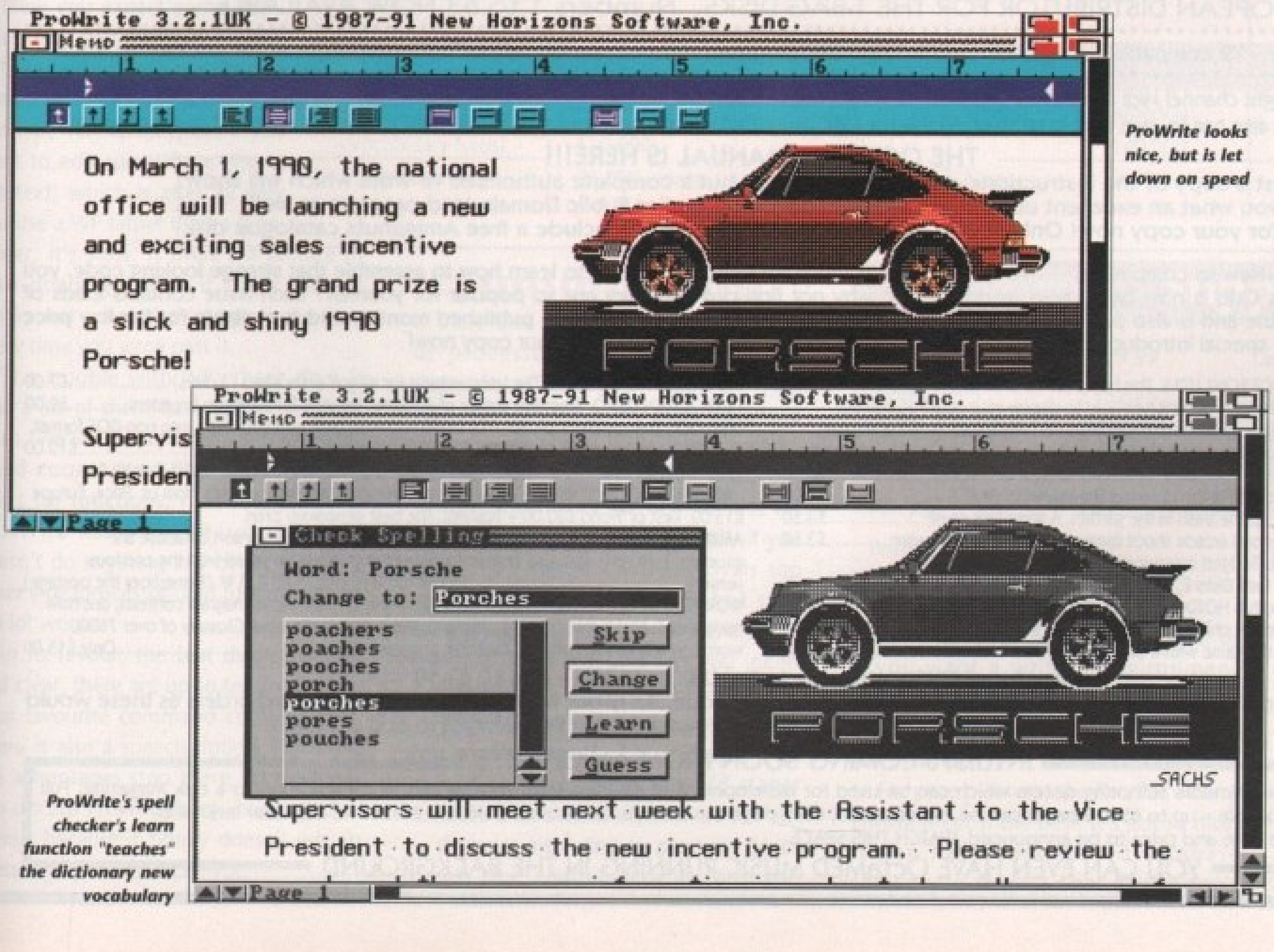
Worse still, the program was even nicer when the two-disk set rapidly and efficiently installed and we were off and scribing.

Advanced picture handling abilities, such as setting colour zero to transparent so that you can flow text around it, and specifying just how the text flows around your picture, make for very attractive documents, especially when you can draw colour-filled or empty boxes, and use lines, to highlight or to simply dress up documents.

However, why is it that the two programs that can make the best use of pictures – this and Wordworth – are the same two that have the least free memory? You can incorporate any kind of .IFF image in Pen Pal (and resize the things) – even a HAM pic – but even a lo-res 32-colour picture requires an astonishing 100k to load into the document.

Thankfully, Pen Pal tells you both how much memory you need to load a pic, and how much you have left. On a one meg Amiga there's only 59k available. It even tells you what the various icons down the side of the screen do, by attaching an explanation tag to the cursor when it moves over them.

This helpful attitude pervades the product, right from the very attractive writing window, with rules, icons and menus, down to its spell checker, for-



ProWrite looks nice, but is let down on speed

ProWrite's spell checker's learn function "teaches" the dictionary new vocabulary

matting options and database. Yes, here's why the damn thing gobbles so much memory – there's a database built in.

Buying a wordprocessor just because it has a database built in is rather dim, but when the WP is as good as Pen Pal it's certainly an attractive extra. Though the package may give a flighty impression, it still packs some powerful punches, such as mail merge.

This is a medium range wordprocessor, that's a dab hand at graphics, and falls over itself to be helpful. If you ever needed a WP to use in an educational environment, this one would be the winner by a mile.

ProWrite

Ah, I do love a box stuffed full with disks, nine in this particular case. Before you scratch ProWrite from your considerations due to bloatedness, there aren't supposed to that many – they've been shoved in for the benefit of reviewers – as if having four separate copies of the program disk makes life any easier.

It has a look and feel similar to Wordworth, as both follow the new Workbench 2 conventions of gun-metal blue colour schemes and gadgets on the scroll bars at the end of the bar, rather than both ends.

Now you expect some dubious boasts from software houses, but for ProWrite to be badged as fast verges on the ridiculous. You can type very quickly, but if you want to edit somewhere else in the text, which is after all why you use a WP rather than a typewriter, it's slow. If there's a picture in your document then it stops while it works out what the image looks like, every time you scroll past it.

The trouble with WPs these days is that a lot of them have similar features. Yeah, we've got macros, .IFF imports, word counts, complete justification, icons for functions, mail merge. Sure, ProWrite has all of these, except it doesn't do anything any better than any other wordprocessor, and half the time it is a lot worse.

In its favour, the text display is nice and clear, there are up to ten macros for your favourite command combinations. There is also a speech option. However, the advantages stop there, so now you can discard ProWrite from your considerations, because it simply doesn't live up to its high performance hype.

Special features chart

	Wordworth	Protext 5.5	Scribble	excellence!	Pen Pal	ProWrite
Memory required	1Mb	1Mb	512k	1Mb	1Mb	1Mb
Hard drive install?	Yes	Yes	Yes	Yes	Yes	Difficult
Max open files	100	1	4	2	4	10
wysiwyg	Yes	No	No	Yes	Yes	Yes
Ease of use	Very good	Good	Very good	Good	Excellent	Good
Text scroll speed	Quick	Fast	Medium	Slow	Slow	Slow
Read Ascii?	Yes	Yes	No	No	Yes	Yes
Read IFF text?	Yes	No	No	No	No	No
Read other WPs text?	Protext, Kindwords, WordPerfect, ProWrite	No	No	Protext	No	No
Justification	All	All	Full only	All	All	All
Case Conversion	Yes	Yes	No	No	No	Yes
Widow control	No	Yes	No	No	No	No
Page Preview	Yes	Yes	Yes	No	Yes	No
Graphics	Yes	Lines	No	Yes	Yes	Yes
Flow around outlines	Yes	n/a	n/a	No	Yes	No
Word Count	Yes	Yes	Yes	Yes	Yes	Yes
Thesaurus:	Yes	Yes	No	Yes	No	Yes
Headers & footnotes	Yes	Yes	No	Yes	Yes	Yes
PostScript driver	Yes	No	No	Yes	No	No
Printer drivers:	400	49	System	System	System	System
Calculations	No	Yes	No	Yes	No	Yes
Sorting	No	No	No	No	No	Yes
Data tables	No	Yes	No	No	No	No
Automated contents	No	Yes	No	Yes	No	No
Columns	User-defined	User	1	1 to 4	1	1
Go to Page	Yes	Yes	No	Yes	Yes	Yes
Online help	Yes	Yes	No	No	Yes	Yes
Free memory check	Yes	Yes	No	Yes	Yes	Yes
Undo Delete	Yes	Yes	No	Yes	Yes	Yes
Text save:						
– Ascii	Yes	Yes	No	No	Yes	Yes
– IFF Text	Yes	No	No	Yes (see text)	No	No
– ProText, Kindwords	No	No	No	No	No	ProWrite, WordPerfect
Spelling checker:						
– Language	English	English	English	American	English	English
– Vocabulary (wds)	110,000	70,000	?	140,000	105,000	100,000
– Supplements:	26,000 words	40,000 words	None	incl	User	User

Summing up

Is there one clear winner from this pile of processors? As ever, it largely depends on what you want from your WP. Protext v5.5 is the most advanced and powerful, and in its latest version, not too painful to get to grips with.

Wordworth isn't far behind, but for those heavy duty jobs – especially if you need mail merge – Protext rivals top range PC and Mac product. As I said, Wordworth isn't far behind, has a much friendlier interface, and lets you incorporate pictures.

The undemanding letter writer seeking a cheap and cheerful package should either consider the old stager Scribble or the more expensive Pen Pal.

If you're intending to produce documents that contain artwork, and you need to print PostScript files to disk, or if you want a writing environment which offers excellent fonts and don't mind adventure, then excellence! is worth a stab.

For pure pleasure, the Pen Pal writing environment is the best. It's just so nice! It also has an integrated database should you require one. If you don't need advanced features, and you do need to be shown the ropes, or simply want a moderate range WP, Pen Pal comes highly recommended. Bear in mind that to use Wordworth, Pen Pal and excellence! you need at least 1.5Mb of RAM – 1Mb simply doesn't stretch far enough when you use artwork.

Suppliers

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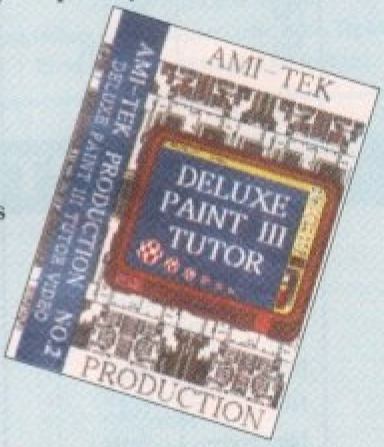
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PUBLIC Sector

There is a wealth of inexpensive software out there, but where do you begin to find it? Steve Williams sticks up a few signposts for you to follow

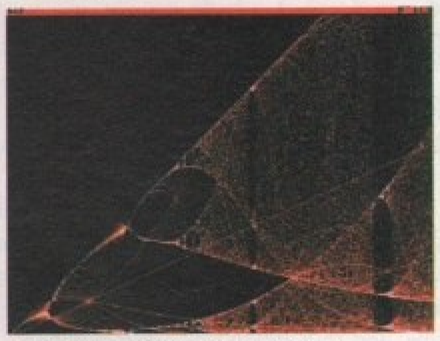
Power LOGO

EdLib Software

Go into any school's information technology department and you're bound to trip over a turtle. No, not the kind that should be kept in the biology department, but the type that's mentioned in the same breath as the word LOGO.

Yes, the little mechanical buggies that use a pen to scurry around and draw pictures with – either on the floor or on the screen.

LOGO is the programming language that is used almost exclusively in schools as a first step to teaching the principles of good programming in other languages. Some critics say that that's all it's good for and that it should stay firmly in the classroom. Others say that LOGO has a lot to offer outside the classroom. One of these exponents is a guy named Gary Teachout – it's not a made-up name, honest.

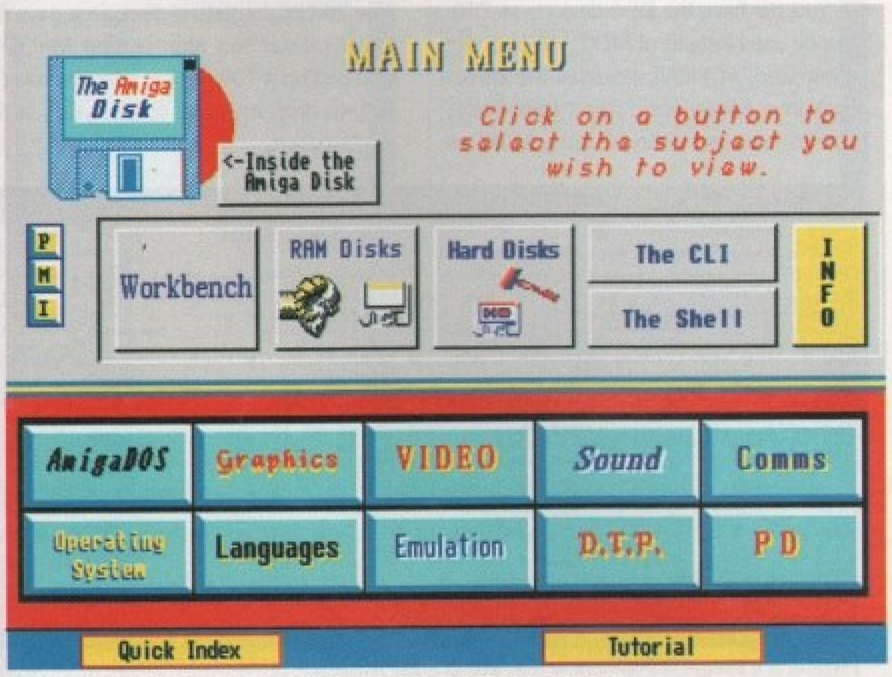

The Power LOGO turtle certainly went overboard when it drew this one

Gary has been enhancing LOGO on the Amiga and has turned it into a version known as Power LOGO, an experimental programming language based on Lisp and LOGO. It is versatile, highly interactive, organises programs as collections of procedures, and includes lists as first-class data objects. With only a few exceptions, Power LOGO is highly compatible with traditional LOGO.

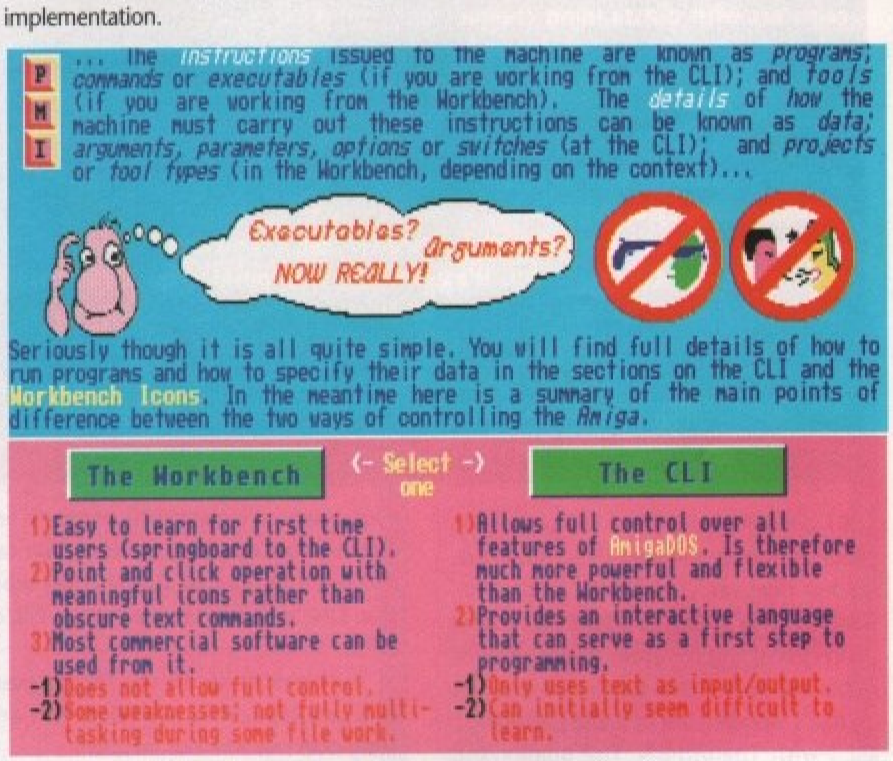
The interface has been provided to make Power LOGO easy for the novice to use. It produces a custom eight-colour screen, already set up with a turtle, where the beginner can have a swipe at the basic turtle graphic commands. It also allows the size of the text/graphic windows to be controlled from the menus, as well as the screen resolution and number of colours.

The disk includes an interface providing a custom screen and menu controls to make its use easier for beginners. There are also some examples and a demo, which will show how to use Power LOGO's multiple facilities, including fonts, palette, windows and speech facilities. Up until I saw Power LOGO in action I was one of those cynics who thought that LOGO wasn't particularly impressive.

I have to admit that I have changed my point of view now – Power LOGO is indeed a step up from the original implementation.



Just about every topic under the Amiga sun is covered in this tutorial



Workbench or CLI? The pros and cons discussed

Amiga Guide

EdLib Software

The AmigaGuide is a splendid tutorial for new and intermediate users. Written using Gold Disk's HyperBook, it provides pages and pages of colourfully presented, useful information on all the aspects of the Amiga that the new, and the not so new, user will find invaluable.

The HyperBook presentation makes swapping between information screens fun, because you are never sure what special effect is going to be used to make the transition. The pages are cross-indexed so there's no need to retrace your steps to reread certain information. If you get lost there's always a button present that will take you back to the main menu.



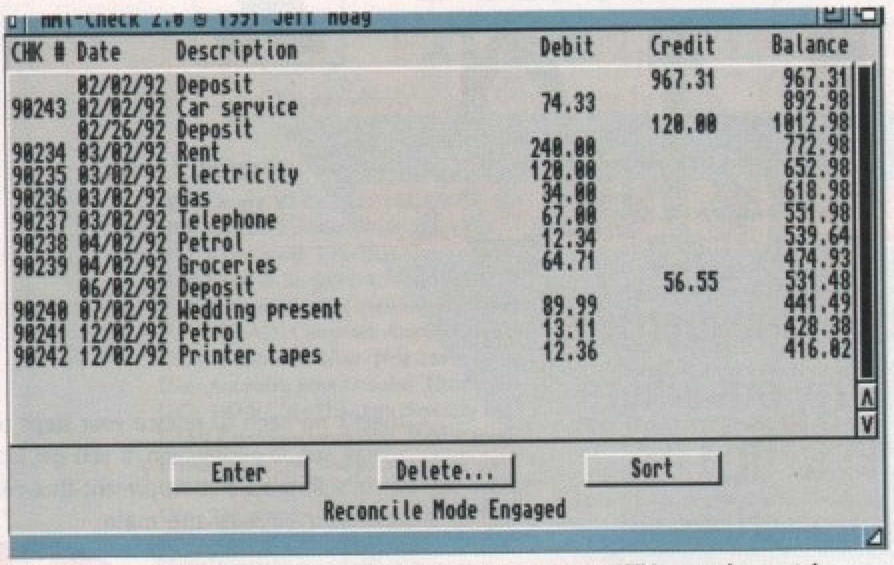
Most of the material on the guide refers mainly to the Amiga 500 and specifically to the 1.3 release of Workbench and Kickstart. Since this is what the vast majority of users currently have, EdLib has given little attention to earlier or later versions.

The pleasing news is that now Workbench 2 has arrived on our shores, EdLib plans to make it the subject of the next release of the AmigaGuide.

Screamin' Miggy

Them!

Screamin Miggy 001 is the first of a series of Amiga sound samples disks by Them! Productions, for use with the range of Protracker, Noisetracker and Soundtracker music editors (Protracker v1.1B recommended). Them! are going to try to produce sample disks for the growing Protracker user base, as well as promoting the Amiga as the ultimate home-based music creation device. Screamin' Miggy



Ami-Check does everything possible to keep track of your cash except fill in your cheque stubs

Ami-Check 2.0

Amiganuts United

In the current recession, most of us are finding money tight. Anything that can help you monitor the movement of your finances has got to be classed as useful. Amiganuts have dug up such a program.

Ami-Check 2.0 is a simple to use, intuitive, chequebook program for the Amiga which only runs under Workbench 2.0x. It allows you to note information about your cheques in a very straightforward manner, displaying a running balance as you do so.

The program also lets you clear and reconcile your chequebook, begin new registers with outstanding cheques only, print all cleared, outstanding or selected entries from your cheque-book to your printer, or save them to a disk file as a standard Ascii code for use in all wordprocessing or desktop publishing programs.

Ami-Check has a unique feature called Flow-Tracker which summarises your cheque register for you by totals so you can see where your money is going without setting up accounts.

There is a calculator with memory functions built in that can transfer figures over to the Ami-Check register. It's essentially a 13 position basic calculator, functioning the same way almost all other calculators. The program will run from the Workbench or from the CLI, separating itself from the calling Shell. Extensive documentation and a quick reference guide is also included. In all, Ami-Check 2.0 streamlines the day-to-day upkeep of your accounting in a friendly, simple to use, and intuitive way.

001 contains more than 150 percussion sounds, mostly sampled direct from CD. Other disks are currently in production, packed with speech, instruments, chords and effects, and complete modules can be obtained from Them! for as little as £1.25 – that's including the post and packaging.

I wish Them! luck. The quality and quantity of the samples makes this first disk a valuable addition to my sequencing programs. I hope they put together the other disks pretty quickly – I'm looking forward to adding them to my personal collection.

PDQ 14

George Thompson Services

PDQ14 contains an interesting cocktail of programs that range from some slick games through to some deeply useful utilities.

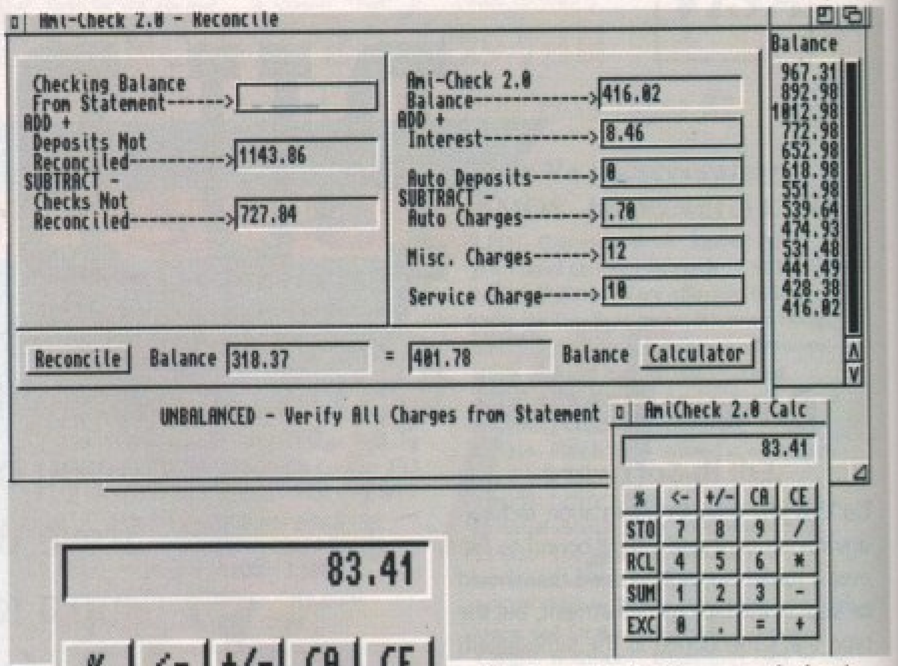
There's Defender, a version of the original arcade game; Textra, a neat little text editor; Degrader, which tries to "degrade" your system so incompatible programs will work on your upgraded machine. You can also use it to boot off floppy drives other than DF0: or force your machine to PAL or NTSC.

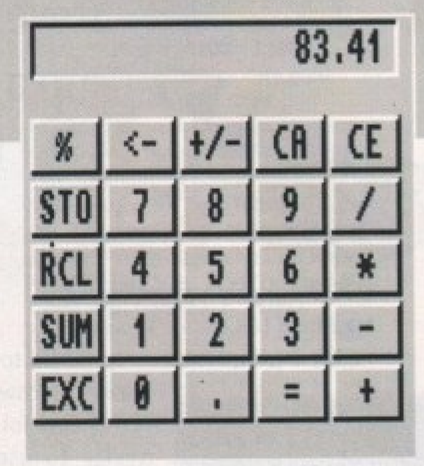
The highlight for me was the discovery of a program called MultiDos. This one really does rate a serious mention.

For a long time now Amiga to PC file transfer has been dominated by a program known as MessyDos, as far as shareware is concerned at least.

The utility proved so fashionable that the shareware version ceased development so that a bigger and better (and less buggy) commercial product could be put together and launched as competition to rival commercial packages CrossDos and Dos-2-Dos.

Casual users found MessyDos quite adequate for their needs. More demanding users, however, had difficulties. Some had trouble reading MessyDos-formatted disks on their PCs, others discovered that MessyDos-formatted disks would unexpectedly corrupt while transferring files on





If the figures don't add up correctly there's even a calculator to help you figure it out

to them. I don't doubt that all these problems were part of what encouraged Norwegian Kjell Didriksen to create MultiDos 1.12.

MultiDos is easy to use and easy to install. Unlike MessyDos, MultiDos doesn't require you to add an entry to the "DEVS:mountlist" file, and thus doesn't need mounting by issuing a Mount command.

A new command is provided – PCMountAll – which when issued from a command line turns all your Amiga 3.5in drives into PC drives, named MD0:, MD1:, and so on, determined by how many floppy drives you have fitted. After issuing the PCMountAll command, you can't read Amiga disks in any of your floppy drives – they are "stolen" by MultiDos for reading and writing PC disks only.

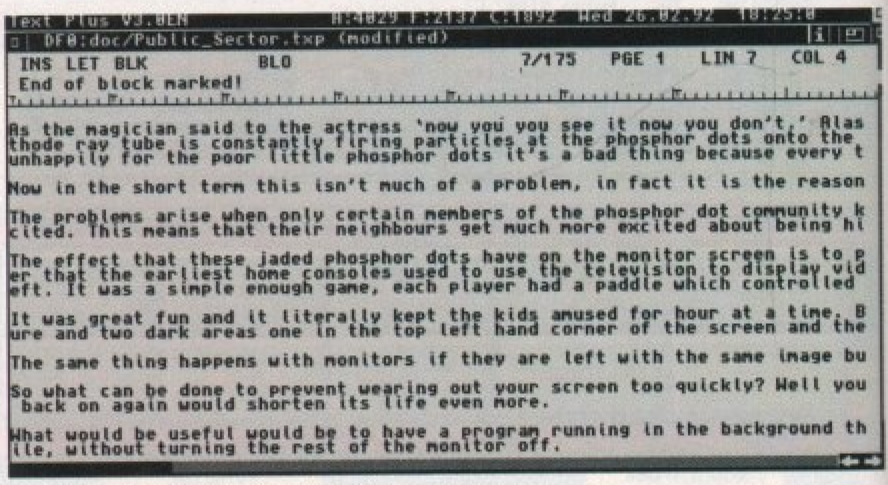
You still have the DFx: devices, so DF0: can be used instead of MD0:. An opposite command, PCKillAll, reverses the drives back into Amiga ones. Apart from being able to read and write PC disks, MultiDos has another trick up its sleeve – the ability to format disks.

The MultiDos PCFormat command is as simple to use as the AmigaDOS Format command – in fact its syntax is almost exactly the same except for the addition of a few more options.

PCFormat knows how to format a PC disk by reading the "PCFormat.Spc" configuration file from the S: directory. As supplied, this is set up to format standard 80 track, 720k, 3.5in PC floppies, but if you are the adventurous sort there is nothing to stop you changing the values in the configuration file to create a format of your own invention.

I need to be able to transfer Amiga files onto a PC disk and from there on to an Amstrad CPC6128 3in disk using another file transfer program called MFU. If I used a 3.5in disk that had been formatted in a pucker PC everything was fine – MFU would clunk along quite happily and do the job. If I tried the same thing using a MessyDos-formatted disk, MFU would not recognise it as a PC disk.

My MFU file transfer program recognises MultiDos-formatted 3.5in disks as true IBM PC-formatted disks. So it gave me great satisfaction after testing MultiDos and finding it 100 per cent dependable (so far), to drop my copy of MessyDos in the waste-basket.



TextPlus is a budget wordprocessor that boasts many features seen in packages a hundred times more expensive

GAMES DISKS

309, 310, 311 3 Disk 1 Meg Star Trek (Brilliant).
370 Tennis, again 1 Meg, very playable.
430 Golden Fleece, great text adventure.
445 Castle Adventure (With Graphics).
492 Werner Game (Similar to Bolderdash).
556* Holy Grail, another brill adventure.
595* Tobias Ritchter acclaimed Star Trek.
596 Game on 2 disks (don't miss this one).
607 St Bash, Space Invaders variant.
699 Pseudo Cop - A Shoot em up (Play Ed 209).
759* Games Galore 1 from Gary Henderson.
775* Property Market, Strategy Game.
781 Games Galore 2 from Gary Henderson.
795 Battleforce V3.6, an RPG game.
801 Wet Beaver, no it's not porn, it's Pong.
827 Games Galore 3, another brill disk.
837 Games Galore 5, More latest PD Games.
841 Black Jack amongst others.
971 Arcade Classics, 3 on 1 great disk.
979 7 Tiles, a very good arcade type game.
981 Quiz Master, test your IQ with this one.
1046 Shapes, an excellent puzzle game.
1017 Sealance, take control of a sub.
1058 Zeus, highly accaimed puzzle game.
1065 Tron 90 + other games, very good disk.
1114* Games Galore 7, another batch.
1145 Pacman, always popular.
1154 Napoleonic warfare simulator.
1155 Master of the town (like Op Wolf).
1159 Dark Staff (Speccy adventure).
1540 Speccy emulator with sound + games.
1166 Stockmarket, excellent game.
1179 Lamer game, shoot those lamers.
1281 Mega Ball, the ultimate Arkanoid.
1284 Chinese Chekers, board game.
1285 Tank, Cave Runner + others.
1342 Castle of Doom, adventure.
1350 Pom Pom Gunner, great shoot em up.
1354 Return to Earth, good Sci-Fi game.
1367 Card Games, about 7 of them.
1419* Super Twintris, the best Tetris clone.
1420* Games Galore 9, lots more new stuff.
1596 Numpty and the Alien Invaders.
1649* Jetman, the old ultimate classic.

UTILITY DISKS

222* RAM Manager, turns off Meg.
265 Home Utilities, Bank Progs etc.
731 Sid + other programs (File Handler).
778 Noise Tracker 2.1 (Create Music).
780 Virus Killers disk.
785 Opti Utils 2 (Tetra copy, diskmaster).
817* Noise Player 3, plays Med tunes.
894* Master Virus Killer 2.0 (Great disk).
947 Disk repairers, you know the score.
961 Spectra paint 3, painting on a budget.
1036 Printer Drivers (lots).
1071 Crossword Creator, with docs.
1111 C-Light Ray Tracing Program (Great).
1133 Slideshow Construction Set.
1148 Virus Blitz, 3 Top Virus Killers.
1153 Personal address book.
1197* TSB vector designer, with manual.
1221 Convertors pack, change files to different formats, a brilliant disk.
1222* Art of Med, get the most from Med.
1255 Picture Help v1.0
1276* Music Construction Kit.
1320 Over 30 music rippers.
1338 Messy Sid 2 (superb disk).
1343 Icon Mania, helps you develop your own Icons, and customize your WB.
1347 Home Utils, Text Editors etc.
1343 + 1344 North C
1356 Windows Bench + lookalike.
1358 Label Base.
1359 Prodialor.
1369 Opti Utils 2 (Imploder 4, Diskmaster 3)
1383 + 1384 Amiga Workstation.
1389 Disk label designer.
1393 Land builder (Fractal landscapes).
1405 Amiga Fox (DTP).
1415 Digital address book.
1417* Graphics Construction Set
1498 Textengine v3. Word Processor.
1703 Textplus v3 another Word Processor.

Remember you get 1 Free disk with every 10 you buy, and you don't have to buy 1000 Disks to get them at £1 each either. Please state which disk you would like free when ordering. Thank you

RECOMMENDED

1633 Gator Graphics Tutorial.
1632 Protracker 1.1B (Sequencer).
1621 A+B (2 disk) Hypnotic Music Disk.
1618 Boot X 4.04 Virus Utility and Editor.
1614 Sample Maker.
1613 Pro Calc v1.0.
1610 Alcatraz Music Disk.
1609 Galaga 92, great PD shoot em up.
1572 Med v3.20 latest version.
1570 Over 50 Workbench hacks, fun disk.
1569 Kids paint, superb junior paint pack.
1565 Rad Bench, RAM Res (TM) WB.
1564 Retcha Sketch, guess what this does
1559 21 Games for your new Amiga +++++
1545 Hard drive utils, backup tools etc.
1538 Card Sharp, a selection of games.
1486 Databases 2, 3 good Databases.

POWER ANIMS

Buzzed, 3 Meg and 3 disk. A superb animation, knocks the spots off all other anims at the moment. £3 for 3 disks.

The Landing by Tobias Ritchter, 4 disk and 4 Meg. Very good anim from the master of Sci fi.

A Day at the Beach 3 Meg, 2 disk, Schwartz at his best, very raunchy

Amy vs Walker, 2 disk, 3 Meg amazing Parody of the Walker demo's from Schwartz.

At The Movies 2, 1 Meg, 2 Meg or 3 Meg (best viewed with 3 Meg). Another Schwartz masterpiece on 4 disks.
Special price £3

*Or buy any 3 animations above for just £10.00
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ANIMATIONS

1536 Gulf Conflict (2 Meg) E Schwartz.
1535 ATF Agility (1 Meg) E Schwartz.
1534 VTOL Anim. (2 Meg) E Schwartz.
1533 Vietnam Conflict (1 Meg) E Schwartz.
6 Probe Sequence (1 Meg).
31 Car & Unicycle, Brilliant 1 Meg Anim.
148 Knight Animation (1 Meg).
306 Agatron F15 Anim (1 Meg).
329 Star Trek Dry Dock (1 Meg) Ace.
406 Frog on a Swing (1 Meg).
463 Ghost Pool (1 Meg) by Tobias Richter.
464 Jet Sphere Anim, my favourite.
485 Cool Cougar (1 Meg).
500 Miagician (1 Meg) Mega Ray Traced.
513 Gymnast (1 Meg) Superb animation.
583 Busy Bee, famous 1 Meg Anim. Great.
591 The Run, by T Ritchter, amazing.
684 Fractal Flight, superb Fractal Anim.
762 Stealthy 2 from E Schwartz.
802 Magician 2, follow up and better.
808 More Stealthy anims by E Schwartz.
821 Iraq Demo, Hussain v Major.
911 Applecus (1 Meg) Again Ray Traced.
975 Juggler 2, another fine example.
976 At the Movies, by E Schwartz (1 Meg).
990 Piano Anim, another 1 Meg show piece.
1022 Amy vs Walker, superb anim by Mr E.
1032 Juggette 2, Girly Juggler (1 Meg).
1094 Coyote 2 (1 Meg).
1096 Conga Man (1 Meg) Ethnic Man.
1122 Miss Mamselle, Sexy Squirrel.
1190 Real 3D Pinball anim (1 Meg).
1191 Tea Cup anim, again with R 3D.
1208 Anti Lemmin demo by E Schwartz.
1209 On 2 disks and a must for 2 Megar's.
1253 + 1254 Dating Game (2 Meg) E Schwartz.

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Thank you.
17-Bit Cat covers over 1700 disks collected over 4 years. Fish Cat lists 590 Fish disks all crammed with useful Utils. Amos Cat covers all Deja Vu, all TBag and Scheme 17.

This has been a cumfy information film.

MUSIC REMIX

1620 Prodigy Remix (Plus owners only).
1617 Twilight Zone (2 unlimited).
1616 Roobarb + Custard.
1615 James Brown is Dead (Funky).
1594 A+B Two Toms presents Blue Pearl.
1593 A+B Bizzare inc. playing with knives.
1576 A,B,C (3 disk) Oceanic Insanity.
1521 A+B Rubberband Man by Yellow.
1497 A+B Utah Saints Remix by Two Toms.
1489 Techno Mania 2
1483 Bagpipe Music (Weird Stuff).
Very little of the above work on a Plus.

LATEST PD

1692 A+B Bomb The Bass Mega Blast remix.
1691 Migamaster Thunder, quality remix.
1690 Migamaster Boogie.
1689 Migamaster Funk.
1688 Migamaster Rave Hard.
1687 Migamaster Woman.
1686* Trashcopy + Filemaster.
1685* Monty Python Music (1Meg).
1684 Amy vs Walker 2 (3Meg).
1683 Relax Mega Mix, Plus owners only.
1682 Bruce Lee slideshow vol 1.
1681 As above vol 2.
1680 Zenith slideshow.
1679* Static Bytes Music vol 6.
1678 Ram Jam Music vol 6.
1677 Canyon Flight (by D Taylor 1Meg).
1676 James Whale Radio Show anim (1Meg).
1675 Rocking Robot animation (1Meg).
1674 Raisens Games Mix.
1673* Metal Disaster Splash.
1672 A+B A Day at the Beach (3 Meg Anim).
1671* Cult, Lethal Formula Demo.
1670 Hip Hop Hater/Disaster.
1669 Jasper Carrott at Blackpool.
1668 On 2 disks.
1667 Digital Disco 2, Brilliant new music.
1666 Demo on 2 disks.
1665 Static Bytes Music 9.
1664* Inner Madness Demo.

LATEST PD

1663 Shamen, make it mine remix (1989).
1662 Amiga + Utilities.
1661 Gate of Time Music disk.
1660 Grapevine 8 (brilliant disk mag).
1659 Anolog 2 mega demo.
1658* Majic 12 Mad decision.
1656 Boot Block Progs 1 (lots of blocks).
1655 More Bootblocks, over 40.
1654 Amibase Pro 2 (latest version).
1653 A+B Mr Potato Head in Circus act.
1652 Bertie Bird + owners disk.
1651 Aliens (Game, shoot em up).
1650 Smash Telly (Game).
1649 Jetman (The old ultimate classic)
1648 Jarre reflections remix.
1647 Scoopex demo.
1646 Ray Traced slideshow.
1645 Digita product range demo's.
1644 A+B Boris Valegio art on 2 disks.
1643 Prince alphabet ST remix.
1642 Textra, boot intro.
1641 Desksid 2.05/Virus checker 5.40.
1640 Hyper Text.
1639 Games Galore 10, from Gary Henderson.
1638 Revenge of the Mutant Camels by the man himself. (A game by J Minter. Brill).

LAST MINUTE MONSTERS

1697 Fractal + Scenery Generators (Superb disk)
1699 Journal, latest version.
1700 Amicash 1.0
1703 Test Plus 3 Superb Word Processor, in the same league as Text Engine 3 (1498).
1698 A+B A selection of video titling programs, and graphic utils.
1701 Amateur Radio utils.
1696 Alien Breed Music Remix (Ace).

SLIDESHOWS

223 Cartoon Pictures.
264* Various Slides.
303* Agatron Slides.
313 Fantasy Art.
314 Fantasy Art (the best).
386* Watership Down Slides.
391* Photo File 1.
392* Photo File 2.
421 The Best Ray Traced Art.
446 Colour Cycling Pics (Very good).
470 Tobias Ritchter Ray Traced Art.
496 Photo Montage.
502* Joe Slides (Very competent Artist).
577* Sun Connection Ray Traced slides.
581 Exodus 3D show
639* Sun Connection 2 (The Ray Connection).
645 Viz Calendar.
656* Mandelbrot Slides.
670 Slideshow Disk 24
695 Golams Gate Slides.
713 Cartoon Slides.
718 More Fractals to delight.
727* Gary Tower Art (17-Bit only).
792* Gary Tower Art (17-Bit only).
830 Sheralyn Fenn Slideshow.
840 Models Disk.
839 Models Disk.
850* Madonna Slideshow.
855* Neighbour's Slideshow.
880 Bo Derek Snaps.
907* NASSA Slideshow.
968 HAM Pics.
992 Nightbreed Slideshow.
994* Robocop Slideshow.
1070 Evolution Slides.
1147* Janet Jackson Slides.
1173 Colour Cycle Pictures.
1176 Invisible World Slides (Microscopic).
1192 Real 3D Slides, superb.
1194* Vista Demo.

Project X product demo check out the latest from team 17 (only £1).
"An amazing shoot em up" said Mr Bun

TBAG DISKS

T59 Clock tic + various programs.
T57 TIV.
T56 Imploder (Cruncher utility).
T55 Typing Tutor + various utils.
T54 Superview 3.1.
T53 Icon View.
T52 Trek Trivia v6.
T49 X Fire (Game).
T48 Text Calc.
T45 Text Paint.
T40 Disk Talk.
T38 Float Icon.
T31 Showiz (Picture viewer).
T29 Black Box (Game).

DEJA-VU £3.50

LPD69 Magical Mix Up (very good game).
LPD68 Virus Buster (an essential disk).
LPD66 Hotel Manager (game).
LPD64 Rescue 2 (superb 3D game).
LPD60 Techno Snail (Platform game).
LPD57 Kiddies Clipart (DTP Kids stuff).
LPD52 LC24 (200) Fonts.
LPD47 Dirty Cash (Fruit Machine game).
LPD45 Music Box (like Sonix, good disk).

SCHEME 17 £1.50

SS1 Alister Brimble music disk.
SS2 Instruments disk.
SS3 As above all instruments are
SS4 Original and not pinched.
SS5 Same as SS2 SS3 and SS4.
SS6 Techno uproar by Mike Archer.
SS10 Techno Attack 1.
SS11 Techno Attack 2.
SS12 Christmas Karaoke disk.

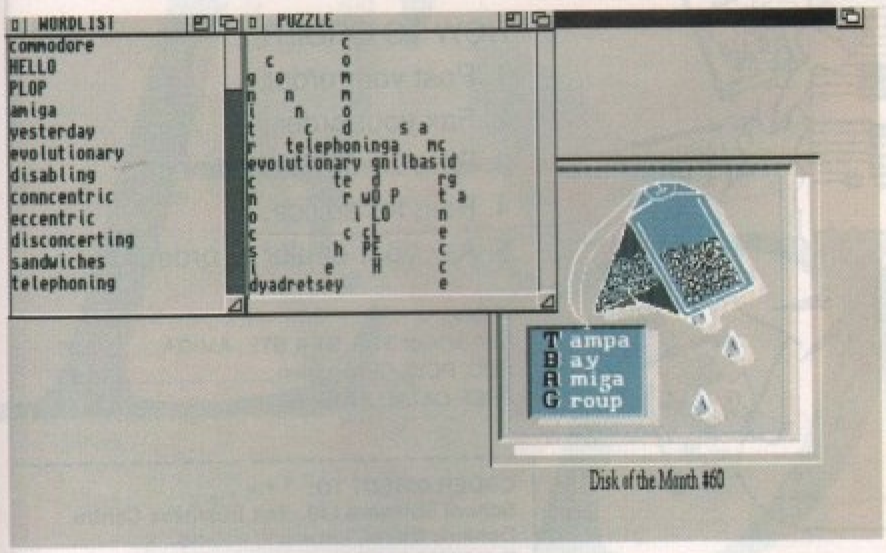
AMIGAN DISKS

AM9 Database + other utils.
AM23 Disksalv (Disk repairer).
AM22 Hacklite (RPG game).
AM20 Semaphore Tutorial (Ahoy mates).
AM23 Zippy Spell 2.5

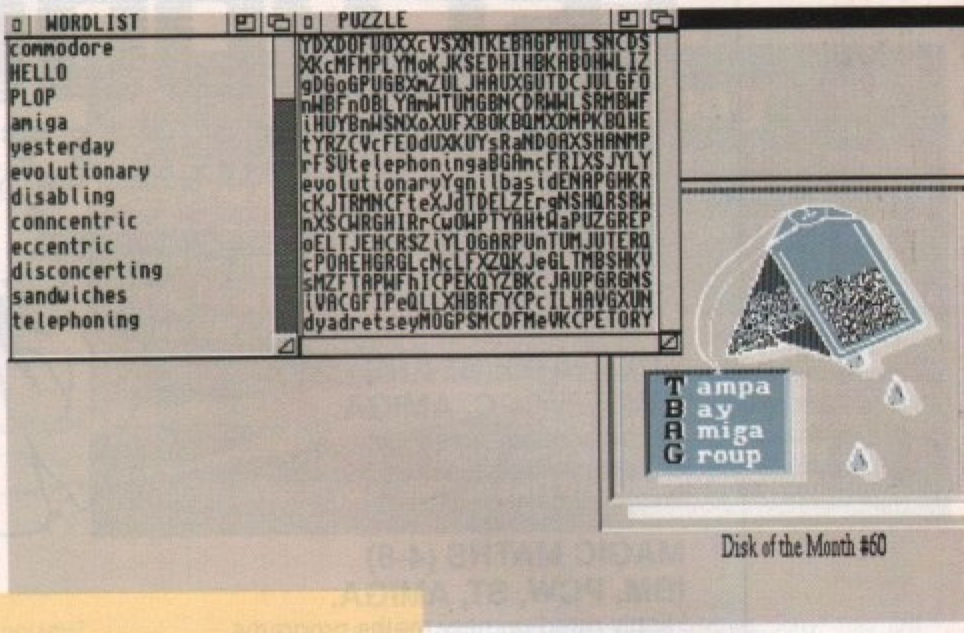
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The words in the left-hand window are hidden in among the letters in the right-hand window...



... and there they are when the other letters are stripped away

TBag Disk 60

Amiganuts United

The 60th Tampa Bay Amiga Group's Disk of the Month has arrived on my desk and as always there's an interesting mixture of programs, three of which caught my eye.

Shadowmaker is a specialised utility for those of you who are heavily into desktop video. If you produce video titles or any type of video text generation then Shadowmaker could be just what you are looking for.

The program will save you having to use Deluxe Paint in order to create shadows for your letters. It can produce professional anti-aliased font generation across all the packages you use for your production work.

Its Canadian author, Stephen Lebans, originally wrote the program as a commercial venture. Shadowmaker is a slightly handicapped version of the original, in that the font save size is restricted to 39 points and under and you can load any font up to 99 points for preview mode. Otherwise, all of Shadowmaker's functions are enabled, making this almost a complete and fully working program.



It has four gadgets that are used to select the type of shadow you want, eight gadgets for selection of the direction and displacement of the light source and two gadgets to select the depth of the shadow. Having adjusted the shadows to your satisfaction, it's a simple click on the Save button and the font is ready to load into your video production package.



It doesn't stop there – Stephen Lebans is currently working on a new version for release into the public domain. This version will boast an impressive list of special effects including perspective, mirroring and rotation, the ability to load any font into your paint program for retouching and enhancing, professional video font sets, hand-crafted bitmaps for video production, text animation, and the ability to alter the inter-character/kern spacing from within your favourite Paint program.

The next program on T-BAG 60 that made me smile was OneKey, an input handler written by Commodore's Carolyn Scheppner for users who can only press one keyboard key at a time. OneKey gathers separately typed qualifier keys – Shift, Alt, Ctrl, L-Amiga, and R-Amiga – and applies them to the next non-qualifier key that is typed. This means that once OneKey is running, Shift followed by a lower case t will produce an upper case T. A very handy utility.

The best fun on T-BAG 60 is probably Wordsearch Generator, a computerised, erm, wordsearch generator that can produce puzzle grid sizes of anything up to 1,000 by 1,000 characters, using up to 50 words. Word orientation can be set in any of the eight primary directions and the puzzle can be rotated or flipped. Wordsearch Generator has a Spartan but functional user interface and can send the word list, key and puzzle to disk or printer. The Workbench 2.0 system default font is supported by the puzzle windows.

It works by generating a first placement and then moving through the puzzle successively until it finds a place where the word will fit. Once a place is found it goes on to the next word. If a fit cannot be made, the preceding word is moved to another place and if it can't find a place to fit itself the program goes back to the word before it.

So if you set it up with a really complex puzzle, the program seems to take forever, but eventually it does complete the puzzle. Because forever is a long time the author, Craig Lever, has thoughtfully added a requester to abort the function.

Setting up the wordsearch generator is simplicity itself. Type a list of words for encryption into the wordlist window – hitting Return pushes the cursor down to the next line ready to enter another word. The scroll bar at the side of the window lets you change the view of the word list. If you need to edit an entry, just click where you want to change and use the delete or backspace.

The Puzzle Window is where the last generated puzzle is displayed. If the puzzle is larger than the window the scroll bars at the bottom and right side can be used to scroll about. If you want to be really silly just for the hell of it, you can resize the puzzle window so it fills the whole of the Workbench screen.

Text Plus v3.0

Crazy Joe's

What's the difference between a Citröen 2CV and a Merc? Well, in terms of functionality, not a lot. Both will do the job of getting you from A to B that they are primarily designed to do. The difference arises in their price tags and their performance.

The same logic applies to wordprocessors. At the top of the range you have WPs like Protext, Wordworth, ProWrite and excellence!. All are very fine, but they cost a lot. At the other end of the scale you have WPs that are in the public domain. While they might not have the finesse of some of the top of the range WPs they have the advantage of being able to do the same basic job without costing the earth.

TextPlus is one such program. It boasts multiple windows, footnotes, serial letters, an ARexx port with 120 commands, ANSI compatibility, the ability to load files crunched by PowerPacker, mapping of function keys, a menu for external applications or macros, powerful block operations and automatic saving in time intervals.

The block operations Mark, Copy, Delete, and Delete Mark can be directly executed using the mouse. There's a backup-mode to prevent files being overwritten, multitasking, and the cursor can be positioned onscreen by clicking the mouse.

That's a pretty damned impressive list of features considering the price. OK, so it doesn't have a spelling checker, but you can get one of those from the public domain as well and still have change left from a fiver. What more could you ask?

Ezra Surf's Postbag

Got something to say through the pages of AC? Ezra Surf is our mailman, dedicated to sitting in a corner reading your letters and selecting the most interesting for publication. Ezra's favourite letters now get rewarded with an exclusive Amiga Computing designer T-shirt.

Drop him a line at:

Ezra Surf's Postbag, Amiga Computing, Europa House, Adlington Park, Macclesfield SK10 4NP.

Please don't enclose saes as Ezra just hasn't got enough paper to reply personally. He might also have to shorten your letters, so don't be offended if you get the chop.

Esp

Desperate plea

I've been meaning to write this letter for over a year, so (as they say in Lemmingsville) "let's go!".

I'll start with the obligatory congratulations on the best Amiga magazine going. I'm proud to say I own every copy and I've just renewed my subscription. There! That's the creepy bit over, on with the letter.

First of all, could you run an article on sprites in C, particularly Vsprites? Are there any good books on the subject?

Secondly, why hasn't anyone reviewed Mech Force/Battle Mech/Mech Battle by Ralph Reed? I have two different versions of the PD game and, after sending my $25 (that was fun – have you ever tried getting a five dollar note from NatWest?) a full copy too. It's excellent.

I'm a bit concerned that Mech Force, which is the full version, seems to be available as PD. Is it the full game with warrior and factory programs?

Finally, a desperate plea. Does anyone out there know where I can get a hold of Little Computer People? It was released on the Mastertronic label for £5 and I've been trying to find a copy for four years or so. It's beginning to turn into an obsession! If anyone is willing to sell their copy, I'll happily buy it.

Ian Hodgetts, Wigan

If you keep an eye on our Programming Almanac column, Margaret may be covering sprites at some time in the future, but I can't guarantee it. For books on C programming, you could contact Computer Manuals (021-706 6000) who stock a wide range of books, or try Bruce Smith Books (0727 41243) with an eye to purchasing their Mastering Amiga C.

As for your PD concerns, I really haven't a clue whether or not some unscrupulous PD libraries are distributing the full shareware version. You could always phone the PD company concerned and ask them for details. Perhaps the Mech Force they do isn't the full game, or maybe the author has released it to them.

We haven't had the program in our PD section recently because Mech Force has been around for a long time now, and we try to stick to the latest releases. Sorry! Your last desperate plea for a copy of Little Computer People sounds like one of two things. It's either an admission of a total lack of taste in software (I mean, have you ever actually played the game?) or it's a tailor-made Amiga Computing Classifieds ad. Send an ad for our new Classifieds column and I'm sure one of our readers will be overjoyed to sell you their copy.

Mr Angry versus Beginners

Prize letter

In response to C Kostryke's letter in issue 46, I would like to say that until reading it I didn't realise that the Prize Letter award is now being given to prize prats!

If anyone who has owned an Amiga since 1988 and hasn't bothered to learn how to make a disk bootable and alter the startup-sequence can then go on to say he'd like our magazine to run a "how to do it" article on the subject for the umpteenth time, then it's high time he swapped his machine for a Nintendo.

I have owned three Amigas since 1987 and have been a reader/subscriber to *Amiga Computing* since day one. I realise that more new Amiga owners are reading the mag, especially after the Christmas period, but it seems to me that every year, starting with the February issue, we are repeating another boring year of how to do this, that, and a bit of the other.

New users have to start somewhere, and I don't knock them or the excellent articles you produce for them, but to award a prize letter to someone who has never bothered to read a beginners' series because it's too technical, well that's the pits. I have never had reason or inclination to voice my opinion through the letters pages of a magazine before, but Mr Kostryke's letter really astounded me.

Graham Woodcock, Barnsley

Phew! That was a proper bit of spleen-venting and no mistake. I take the point about the repetitive nature of advice on AmigaDOS, but there's not a lot we can do about it.

It's the job of a magazine like Amiga Computing to cater for all of it's readers, especially the new ones who may be feeling a bit lost and who could either give up the more serious side of the Amiga if we don't support them or, even worse, stop reading the mag altogether.

We go back over the same ground every year because, as you point out, we gain a lot more readers every year. Our circulation increased by a massive 41% last year, making Amiga Computing officially Europe's fastest growing Amiga magazine.

In order to support and retain these new readers, we are running a new beginners' series, and we'll continue to run it as long as we receive letters by the sack-load from people like the much berated Mr Kostryke.

As a consolation, I've decided to award you this month's prize as your letter could have come from Mr Angry himself. Now could you write to us with your full address?

CDTV delights

I'm writing to say how much I enjoy using my CDTV, and think other readers should know how pleasurable the machine can be.

For instance when you're working on DPaint IV, making music with OctaMed, or producing a multimedia presentation – in fact anything other than playing a game – you can do some neat extra things. Just slot a CD into the caddy, put it in the CDTV and press play to listen to Public Enemy while working on your creation.

Plus if you have MediaShow, you can have music playing straight from CD when recording to video instead of having to compose a tune in Sonix, which is a rubbish program in any case. Just thought you'd like to know!

Ian Harper, Northampton

Hmm – not boasting to all our non-CDTV owning readers, are you Ian? You seem to have realised what an ideal tool CDTV is for video and multimedia projects, but only if you can afford the £449 price tag.

Perhaps the Amiga external CDTV-compatible ROM drive will be the introduction many of our readers have been waiting for to the world of CDTV.

Driven to piracy?

I'm jealous of all you people in Great Britain! You can buy all the software you like over there, but for me in Holland this is almost impossible.

A computer store over here offers a minimum of software titles, many of which are outdated, overpriced, and inferior. The only method of obtaining decent software is by using your connections, and this means getting hacked (don't you mean stolen? – Ezra) software which often doesn't work properly. The hackers import the titles from all over Europe, so you get the latest titles for free as soon as they arrive in the shops.

Let me make one thing clear – I know that copying is stealing, but if the software houses would distribute their titles to more stores in overseas locations I would buy ➤

them instead of doing something illegal! I realise software can be bought through mail order, but I tried this once and all I got was lousy service and a badly-working program I could have copied from a friend.

Having said this in defence of hackers, I still like the stance taken by *Amiga Computing* and the position it takes against pirates and their accomplices. At least your magazine is available all over the Netherlands.

Jan de Vries, Holland

While I sympathise with your problems in finding decent software in Holland, I can't accept this as an argument in favour of theft, which is what "hacking" and "piracy" really are. I might as well say that there are very few Pontiac dealerships in my home town, so it's OK to go out and nick one from a visiting American tourist.

You say you have tried mail order and received lousy service. Well, I sympathise with that, too, but you really should try to order software from one of the larger reputable British or German mail order houses.

It's no use reverting to piracy because you've had one bad experience with a mail order cowboy firm, so persevere and you should have no excuse for hacking, or whatever other name you like to give to software theft.

Is PD quality software?

I will be receiving an Amiga 500 for my birthday in April, so I decided to subscribe to *Amiga Computing* to see if I could learn anything about the machine beforehand. One day while I was looking through the magazine I came across a PD advertisement and I noticed that everything was very cheap.

For example, there was a business pack with word processor, spreadsheet, database and so on, all for £6 – usually that would cost £600.

What I'd like to know is what public domain is and why it is so cheap?

Tom Advani, Swindon

Public domain (PD) software is usually written by an enthusiast, who may or may not be a talented programmer, and then released as free software to anyone who cares to use it. PD libraries will charge you for the disk, the cost of duplication, and a nominal amount to cover running costs such as postage and packaging. That's why it's so cheap.

The problem with some PD software is that it can be poorly programmed and badly structured so that it causes crashes when used with other software. On the other hand, you will find a few jewels among the dross, and there are several extremely well written and near-professional quality programs around.

Many of the better programs will be shareware, which means you're allowed to try them, but you are expected to send money to the author if you like them and mean to use them. The business pack-type of PD disk collections usually come on two or three disks and are a good introduction to the PD scene, so if you think it's worth the risk, send your £6 and hope you like the disks.

Repair? What repair?

A warning to all readers who need computer repairs! Beware of adverts asking you to send your machine and a fixed amount of money to the company concerned.

I sent a Commodore 64 (a what? – Ed) to a company called W.T.S. along with the required amount of money. This company seems to use a substitute form of repair. If the fault should be, say, on the PCB (like a dry joint) and more difficult to find, they return your machine unrepaired and say it's their choice to keep your money.

This means you lose your cash. You should always take the machine to a computer repair company where you pay the money after the job is done and according to the repair carried out.

R A Hallett, Tintern

If you feel you've been unfairly treated by a company of any kind, you should contact your Trading Standards Officer. This is the only way to ensure that companies who offer services and don't deliver can be kept in check.

In addition, before parting with any money, you should always find out exactly what you are paying for. If the company guarantees a repair, then they're legally bound to carry one out or refund your money. On the other hand, if they are charging for labour and time and don't specifically say they'll repair your machine, you'll find it a lot more difficult to get your cash back.

There's a certain amount of leeway in these situations for the Advertising Standards Authority to act. If an advertisement states that repairs cost such-and-such, the ASA might conclude that to charge for the consultation rather than the repair itself is unfair and order the company to withdraw its advertisement.

Without seeing your bill, service agreement, or the company's advertisement, I can't judge whether W.T.S. has actually done anything wrong, but if you are convinced they have, you should certainly take the matter further yourself.

Ezra online

Ezra Surf can be contacted on a whole host of bulletin boards and conferencing systems. If you have anything to say, get it off your chest online!

Amiga Computing also has its own Fidonet echo which is being carried by BBS systems throughout Europe. Any Fido sysops interested in hooking up should collect AMIGA_COMP off the backbone.

If you are experiencing difficulty, please contact Tony Miller, sysop of our home board – 01 for Amiga.

Additionally our mailman with the most, Ezra Surf, hangs out on the following services:

Service	Account number
Prestel	999800263
Telecom Gold	74:MIK911
CiX	amigacomputing
CompuServe	70007,4734
The Direct Connection	uad1132
01 for Amiga	Amiga Computing

CONTACTS

It's not what you know – it's who you know!

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We are happy to answer your technical problems in our ACAS section. Send your letters to **ACAS** at the address below

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We are always on the look-out for good Amiga art. Send your work (as an IFF) to **Amiga Gallery** at the address below

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Got something to tell other *Amiga Computing* readers? Send your general letters to **Ezra Surf's Postbag (ESP)** at the address below

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Enter competitions using the details on the form. If you have any queries contact **Jonathan Maddock** on 0625 878888

PUBLIC DOMAIN SUBMISSIONS

PD libraries are welcome to submit their latest releases. Submissions should include a detailed list of what each disk contains. Jiffy bags to **Stevie Kennedy**

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Technical enquiries about the Workstation should be sent IN WRITING to **Workstation Support** at the address below. Please return faulty disks to the supplier

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If you have a any comments about the editorial content of Amiga Computing please write to the **Assistant Publisher, Eddie McKendrick** at the address below

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Except in the situations listed above we **cannot accept telephone enquiries.** Please write in to one of the departments listed in this panel

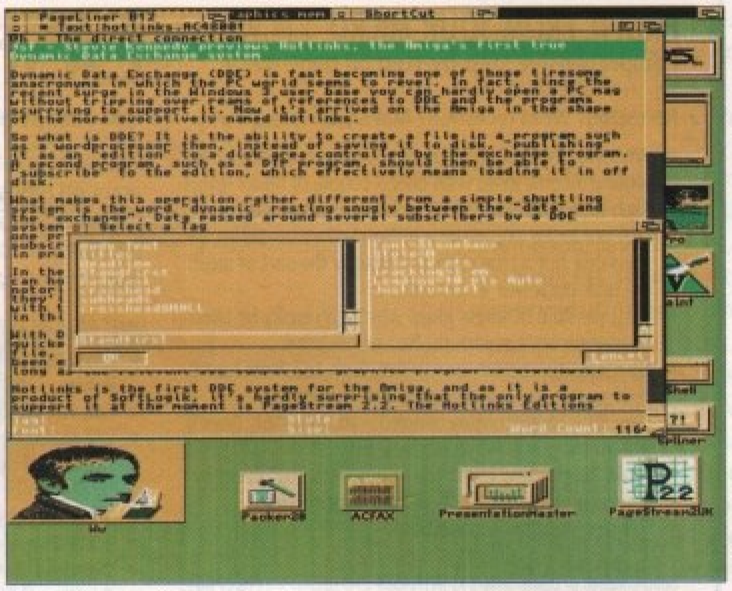
SAVE THOSE SAEs!

Please don't send us SAEs, we can't promise to reply to every letter so it really is a waste of your stamp. Sorry!

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The direct connection

Stevie Kennedy previews HotLinks, Amiga's first true Dynamic Data Exchange system



Set your style tags in Pageliner, then publish the text to PageStream

Dynamic Data Exchange (DDE) is fast becoming one of those tiresome acronyms in which the PC world seems to revel. In fact, since the recent surge in the Windows 3 user base you can hardly open a PC mag without tripping over reams of references to DDE and the programs scurrying to support it. Now it's arrived on the Amiga in the shape of the more evocatively named HotLinks.

So what is DDE? It is the ability to create a file in a program such as a wordprocessor then, instead of saving it to disk, "publishing" it as an "edition" to a disk area controlled by the exchange program. A second program, such as a DTP package, should then be able to "subscribe" to the edition, which effectively means loading it in off disk.

Dynamic

What makes this operation rather different from a simple shuttling system is the word "dynamic" resting snugly between the "data" and the "exchange". Data passed around several subscribers by a DDE system is tracked all the time, and when changes are made to it in one program, the edition is updated in every other program presently subscribing to it. It sounds complicated, but it's really very simple in practice.

In the DTP sector in particular, DDE is an exciting development we can hope to see take off this year, though with manufacturers notoriously uncooperative in the Amiga market it is unlikely that they'll all settle for a single system. For now, console yourself with the fact that competition will lead to more rapid development in this area.

With DDE, you need never edit your text on a DTP page, as it is far quicker to flip to the text editor, make a few changes, update the file, then flip back to the DTP package where the changes should have been executed. The same goes for a graphic you need to retouch, as long as the relevant DDE-compatible graphics program is available.

HotLinks is the first DDE system for the Amiga, and as it is a product of SoftLogik, it's hardly surprising that the only program to support it at the moment is PageStream 2.2. The HotLinks Editions package will be sold as an introductory package containing the HotLinks library and editions management programs, the Hotlinked text editor PageLiner, and the similarly equipped Bit Map Editor (BME).

Installing HotLinks to hard drive is very easy, and takes only a couple of minutes. A directory is created on the hard drive of your choice, the HotLinks library is copied to your L: directory, and the HotLinks management programs are copied across to the HotLinks drawer.

PageLiner and BME are not included in the installation, but neither requires complex installation and both can be dragged across to their new home on the Workbench screen.

The first job with a newly-installed HotLinks is to double click on the HotLinks program icon to fire up the system, which will make the appropriate library resident. Right from the start, the user will find that security is well taken care of, and will have to enter his or her name and password.

To begin with, the "root" password, supplied with your copy of HotLinks, is needed so that you can add your own and other users' passwords – a task accomplished with the rather unfortunately named Hump.

This program enables the adding of as many users and passwords as you like, any or all of which may be collected together as a group. These at first seem a little unimportant, but if you use HotLinks over a networked system or have a machine used by more than two or three people, the group becomes a useful second assurance of data security.

Restricted

When an edition is published, be it a text file or bitmap, the publisher can decide whether the edition is for personal use only, or whether its use is restricted to the publisher's group. The file can be made available to everyone, of course, but unless a machine is being used by just one person, this could lead to problems when the office idiot decides to experiment with next month's contents page.

There are spell checker and word search options, and even a thesaurus which belies the program's simple Workbench-style screen.

BME, as its name suggests, is restricted to work on bitmapped graphics, and can edit IFF and GIF files. All files were represented in greyscale on the pre-release version we tried, but the program does have cut, paste, and a crop function which DTP users will find invaluable. Using BME, an IFF or GIF bitmap picture can be cropped and edited outside PageStream and the results seen instantly on the page.

The program has the ability to edit RGB and CMYK colour values, and basic drawing tools for retouching, but it isn't really intended as a colour graphics processing program. It is more of a tool for use in conjunction with PageStream, and as such is extremely useful to anyone using bitmap graphics.

According to SoftLogik, there should soon be a HotLinks-capable graphics editor for the sort of structured drawings more commonly used in decent DTP productions, and if the standard takes off we might even see established high-end packages such as Art Department Professional taking HotLinks on board.

As it stands, HotLinks is a superb tool for PageStream 2.2 users, and I can't recommend it in terms too strong for those people. For the rest of the Amiga world, and the DTP area in particular, it is the first move in what could be a whole new area of user friendly inter-program communications.

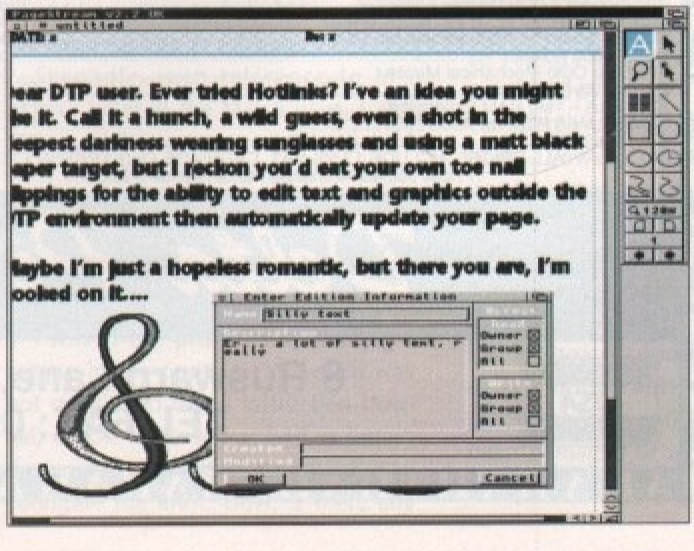
Depending on the level of support from other software houses, HotLinks could become a very important tool in application areas such as CAD, databases, wordprocessing, and DTP. If support isn't forthcoming, it will at least be an essential add-on for all PageStream users. Rest assured we'll be keeping you informed. AC

HotLinks is a product of SoftLogik Publishing Corporation
Phone: (0101) 314 894 8608
Price: TBA
Available: Soon

The competition

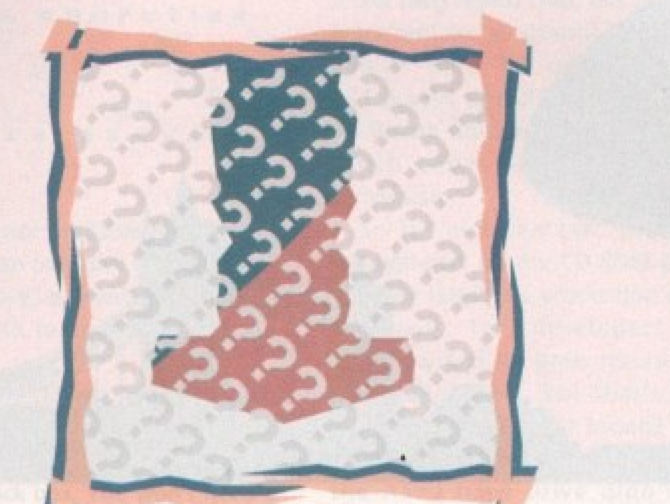
Gold Disk, makers of Professional Page, aren't sitting on their laurels as far as DDE is concerned. They were the first to develop a very limited form of DDE with the direct link between ProPage and the article editor, and the release of ProPage 3.0 this month should see this greatly expanded upon.

The article editor will be retained and will be augmented by a direct hot link to Professional Draw 3.0, due for release later in the year. There's no word yet on whether or not there will be a bitmap editor like BME, but I'd be surprised if SoftLogik's lead wasn't followed in this case.



Publish your text from PageStream and edit it in Pageliner

Printer out of puff? Computer cracking up? We're here to help!



AMIGA COMPUTING ACAS ADVICE SERVICE

Write to ACAS, Amiga Computing, Europa House, Adlington Park, Macclesfield SK10 4NP

Save your saes please – we can't reply personally

Keyboard fix

I was interested in the letter from Y H Ali of Stratford as I too had a similar problem with my keyboard. I'm happy to say I've now fixed it, and that the problem was a simple one.

All I did was open the Amiga, turn the keyboard over, and examine the underside. There's a plastic strip protecting the solder joints, under which were a few joints bent over and contacting with the solder tracks below. I bent these out until they were straight and my keyboard then worked fine!

Is there any chance of a free subscription?

Martin O'Donnell, County Donegal, Eire

No, but thanks for the tip.

Amibase copy

I am a newcomer to the Amiga and having bought your magazine I am trying to use CoverDisk 29, most especially the Amibase Pro II program. I seem to be having difficulty copying this to a new disk of its own.

I am using an A500 Plus, and I'm completely baffled. I managed to copy Super Duper to another disk and that works fine.

Something else puzzles me. In the Absolute Beginners article, you describe Workbench as 2.04. I have only had my machine for three months and mine is Workbench 2.0. Is it out of date already?

Jim Lawson, Loughborough

Many CoverDisk programs require a bit of extra messing around when it comes to copying them to other disks, and Amibase Pro II is no exception. Usually, there'll be a font that's needed, or a prefs file from the S: directory, or something of that nature. With Amibase, however, things are a little more complicated.

To save taking three pages to explain it, and a lot of hassle on your side, probably the best solution to your problem is to make a copy of your CoverDisk and get rid of everything you don't need.

Just boot with the copy, click on the directories you won't be needing, such as Game of the Month and Programming, then select Delete from the Icons menu. This should clear enough space for you to keep plenty of data on the ravaged CoverDisk.

ARexx editor?

After reading your article on ARexx, I decided to try it on my Amiga A500 Plus, but as I have had my computer for only six weeks, I soon ran into problems. You mentioned that "ARexx scripts are written using a text editor".

Could you please tell me if the text editor is part of the Workbench, and if so where I can find it, or is it on a separate disk, in which case can you give me the name of the supplier?

P M Taylor, Preston

The term "text editor" is given to any program which is capable of loading and saving text files, editing (changing) them, or enabling you to write them. Your Workbench 2.04 disk has a text editor called "Ed", which isn't the best available, but which will serve for the purposes of typing in short ARexx scripts.

You can use Ed by using the Execute Command option (or Shell) to issue the command:

```
ED REXX.SCRIPT
```

rexx.script can be any name you like, as Ed won't kick up until it has a file name. If rexx.script doesn't exist, Ed will create it as a blank file, and you can then type in your script. When you save it, use the Save As option from Ed's menu system and save the script in the "rexxc" directory on your Workbench 2.04 disk.

There are friendlier and more powerful text editors available – one of the best is the shareware program QED. This is available through many PD libraries or on *Amiga Computing's* GraphicStation disk.

Helpful soul

With reference to a letter by G Glynn of Reading in the January issue, I have an A2000 with A2088 bridgeboard, and would be willing to help him out with the required installer software.

Secondly, with reference to M I Alden's letter in the March issue, I also have a GVP Impact series II hard card with the ability to add 8Mb of RAM. Recently I purchased 4Mb of Goldstar SIMMs, which contain nine chips per meg, and I had similar problems to Mr(s) Alden.

I solved the problem by putting a jumper in the position J15 (which was not mentioned in my instruction manual) on the hard card as well as setting the jumpers as specified in the manual to configure the RAM. Now, is there any way I can configure my Amiga memory to be used as memory on my A2088 PC bridgeboard?

Paul Hooper, Elgin

Thanks for the answers on the GVP problem. I'd still recommend you buy the official GVP SIMMs, but for those with access to other types, a bit of experimenting with the jumper settings can't do any harm.

As for using extra memory with your bridgeboard, the only way of adding RAM to your A2088 would be to buy a PC RAM card and insert it in the PC slot available beside your A2088. You can't use normal Amiga memory.

On a brighter note, PC RAM cards are quite cheap, so you should be able to upgrade your bridgeboard without breaking the bank. Try our sister magazine *PC Today* for third-party peripheral manufacturers' advertisements.

Drive problems

I currently own an Amiga A500 with a Datel 512k expansion, Power 880B, and the usual stuff. I bought the machine second-hand about four months ago, but am now finding that it's not all I imagined it to be. Games which used to work no longer do, I'm getting read/write errors on disks, and games keep crashing with a guru alert.

It's not a virus as I left the machine unplugged overnight, removed all peripherals, booted up Blitz for the 880B, and now it won't load, simply giving the "Insert in drive df0:" requester.

I'm considering three courses of action:

1. Kill myself.
2. Kill the *&?>! who sold me this lemon.
3. Replace the internal drive with a Power internal hard drive.

Which of these would you recommend?

Damian Barrow, Chorley

Hmm... If I recommended the first, I'd have trouble sleeping at nights, the second would probably be illegal, and the third would cost lots of money. Not an easy choice.

Seriously, though, your best bet is to replace the internal drive with a new floppy from – to take a name completely unprompted and out of the blue – Power Computing. Before you do, however, try a couple of checks first.

If your machine is second-hand, there's no warranty to worry about, so open it up and check to make sure that the keyboard connector and internal drive ribbon connectors are both in place properly and that neither have been damaged or worn down through

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age. If these check out OK, you'd be best to go for the replacement drive or have the machine looked at by a reputable repair company.

Not again!

Normally, I buy *Amiga Computing* every month, but when I bought issue 42 last week, I realised it was going to be the last.

The reason is that the CoverDisk was infected with the Saddam virus, which ruined a good half of my software collection before I found out. Now I can't even use my Amiga because I don't have enough money to go out and buy a decent virus killer.

Maybe you should put a warning on the magazine telling people to check the disk for viruses if you can't be bothered to check it for yourselves.

Dale Bates, Victoria, Australia

The November 1991 issue did not have a virus on the CoverDisk, and that's final!

Judging from the number of letters we've received concerning the issue, it's clear that many readers find it difficult to tell the difference between a virus and a virus killer. You say you cannot afford to buy a virus killer, yet the issue 42 disk contained Virus Checker 5.32, which at the time was the most advanced Saddam killer available.

Every time we put a killer on the disk, we get people contacting us who've used the killer for the first time, realised they've got a virus, and assumed it was on our disk. Not true! You probably had it for ages and didn't realise until we saved the other half of your software collection by giving you Virus Checker.

CD ROM latest

I've heard that the release of the CD-ROM drive for the Amiga is imminent, and I wonder if you could answer some questions on it.

1. Does it really make the A500 work just like a CDTV, and do you need a special control pad like the CDTV has?
2. Is it compatible with Kickstart 1.2?
3. If not, will a compatible version be released, and will it cost more?
4. Does it need an ECS chip set?
5. Does it have a through-port into which I could plug my Action Replay Mk II cartridge?

I've been reading your mag since issue one, and it's easily the best, so I'm expecting an answer!

Ian Heywood, Holyhead

As the A690/A570 (Commodore still haven't confirmed what it's going to be called) is not available for test as I write this, I can only give you the information we have, augmented by a quick telephonic visit to Commodore's engineers.

The CD-ROM drive will, in effect, turn your A500 into a CDTV, because CDTV is just a 1Mb A500 with a CD drive in a black box. You won't need a special control pad, as the Amiga's mouse and keyboard will do the job just as well.

Compatibility with Kickstart 1.2 could be a problem. You can't auto-boot from anything under 1.2, and the CD-ROM drive may need to auto-boot for certain software, such as commercial games stuff. This isn't a definitive answer, but I wouldn't be surprised to find it will only function properly with 1.3 and above. Check with your dealer before buying one. As for a Kickstart 1.2-specific version making an appearance, forget it. Why not just buy a new ROM chip and Kickstart sharer? The Power Computing sharer can hold three ROMs, so you could switch from 1.2 to 1.3, then 2.04 if you really wanted to.

The CD-ROM drive should work with a half meg Agnus chip, but as its software will be so graphics intensive, you're best to upgrade to an ECS Agnus and 2Mb total memory by fitting one of the memory cards which allow the 1Mb chip RAM conversion.

So far as I can tell, there's no through-port on the CD-ROM drive as yet. The latest pre-production models supplied to developers and photographed for press releases have no through-port, but that's not to say Commodore won't include one at the last minute. Remember that the A590 hard drive didn't have one either.

Look out for final details on the CD-ROM drive as we receive them.

PC software

For the last 19 months I have been doing a computer course with Pitmans, and I've been having trouble getting the software we use to work on my 1Mb Amiga 500. What I need to know is how to run these programs, and where I can get information to help me use them on the A500. All the programs in the course are IBM-compatible and don't run on the Amiga. The main ones are WordStar 6 and Sage Accounting, both of which come on two 3.5in disks. I have one or two others, but these are the main two for the course.

Having retired as a welder due to back problems and claiming invalidity benefit, I don't have much money, so bear this in mind.

S W Candy, Bletchley

Normally, I'd suggest a PC emulator as this piece of equipment would enable your A500 to pretend it's an IBM. However, the hardware route will cost anything up to £200 and over, so the only option on terms of cost is to try a software emulator.

There's a relatively new and quite good emulator called IBemulator, which is available in demo form from the better PD libraries.

Once you've tried it out, you can opt to pay the shareware fee to the author, which shouldn't be more than about £30. Try Softville PD or NBS, both of which are fairly supportive PD libraries, and both of which should have this program on a Fred Fish disk.

You may find that the speed of your IBM programs is fairly awful, and there'll be very limited support for graphics, but as long as your main uses are wordprocessing and spreadsheets, you won't need the whistles and bells.

New hard drive needed

I have a fairly old Amiga 500 (Kickstart 1.2), with half meg memory upgrade, external floppy, and Star LC10 colour printer. I use this mostly for games and a rapidly increasing amount of wordprocessing and spreadsheet applications (Kindwords and Superplan) due to the acquisition of a new business. I would now like to upgrade my system, possibly adding a hard drive and a new wordprocessor.

1. Which hard drive would be best? I haven't got a fortune and want it to take a lot of hard use with as much speed as I can get.
2. In order to effectively use a hard drive, exactly what modifications should I make to the A500?
   I understand that a solder track has to be drilled to enable me to upgrade to the latest specifications. I notice that Kick 1.3 ROMs are available, but what about the Workbench disks? What about upgrading to A500 Plus spec?
3. Which wordprocessor would you recommend? I need one with the ability to draw boxes around text to create forms for use in my business, as well as the usual mailmerge, spell checker, and thesaurus facilities.

Hugh Edwards, Auchnacroish, Isle of Mull

The best value hard drive for your purposes is probably the A590 variant supplied by Hobbyte (0727 56005). This has a 52Mb Quantum mechanism and space for 2Mb fast RAM. If you need a faster drive or greater RAM expandability, go for the GVP Impact Series II from Silica (081 309 1111), but expect to pay a bit extra.

You won't need to make any alterations to your motherboard to run a hard drive, but if your want it to auto-boot, you'll have to buy a Kickstart 1.3 upgrade kit. These can be purchased from CPC Ltd (0772 555034), but possibly your best bet is to go for a ROM sharer.

Power Computing's (0234 834488) ROM sharer can be purchased with 1.3 or 2.04 ROMs and if you buy the three-way switch version, you can have your 1.2 ROM sitting alongside these two for total compatibility.

Workbench disks can be bought from CPC, and the ECS chip set should be available soon from Commodore, though certain third-party retailers are offering the Super Denise and Super Agnus chips already. See the small ads for these.

The track drilling you refer to is probably that needed to upgrade to 1Mb chip RAM. Don't bother with this unless you're going to use graphics-intensive software, as you'd need to buy a 1.5Mb RAM board and Fatter Agnus chip as well.

If your wordprocessing needs will centre around business-orientated labels, invoices, and so on, then you should go for Protext 5.5. Protext has a fairly easy to use line drawing mode, which is well covered in the tutorial video we reviewed last month.

Arnor can be reached on 0733 68909 and will be happy to supply both products.

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A wise man cometh

What is Sage, and will it develop into the Amiga's high-end graphics standard?

The explosion in Amiga 24-bit technology over the past year has, as we predicted in early 1991, caused a revolution in the Amiga world. Anyone who says any different has been reading the wrong magazine since then, as even the most casual *Amiga Computing* reader will have noticed that the amount of coverage in this area has increased exponentially.

For a machine which was once a good amateur video platform to suddenly start making appearances at the heart of the most sophisticated broadcast setups, and to produce award-winning animations and sequences for television in the space of less than 18 months, is what even the most reticent among us have to acknowledge as a revolution.

The problem with revolutions is that more often than not they run out of steam because the initial feverish enthusiasm dies, leaving no more than a bare shell of rhetoric and idealism which can't sustain much for long. In the case of the ageing Amiga revolution – and let's face it, we're well past the "June Days" – there are now as many standards as there are 24-bit cards.

We've seen the various 24-bit paint packages migrating from one card to another, which is a start, and software houses such as ASDG (Art Department Professional) attempting to support as many cards as possible within one piece of software. Now there's a first move towards a proper standard.

Standard interface

Two respected US companies, Digital Micronics and Progressive Peripherals, got together at the Denver developers' conference last year with one aim in mind – to produce a standard software interface for the Texas Instruments 340x0 family of graphics processors. We've seen little of these newish chips in the UK as yet, but you can rest assured that they will soon become as common a technophrase as 68030.

The TMS34020 chip is a dedicated high-performance graphics processor designed to make graphics operations as fast as possible. It runs at 40MHz and its 32-bit architecture allows a stunning 40 MFLOPS (millions of floating point operations per second).

Digital Micronics' Resolver board was the first Amiga peripheral to utilise the TMS chips, in the shape of a 60MHz 34010. The second is Progressive Peripherals and Software's Rembrandt board, unleashing the 34020/34082 combination on us. So where's the software? Enter Sage, stage right.

Sage (Standard Amiga Graphic Extension) has been jointly developed by DMI and PPS to provide a platform on which software houses can build applications for the 340x0 boards as easily and quickly as possible. It consists of a central Sage library plus a range of supporting libraries, and is based on Texas Instruments' own TIGA interface, which is widely used in the PC world.

The core library consists of over 120 functions which programmers can use in their Sage-compatible software to take some of the hard work out of a great many standard functions, such as init_cursor, set_cursor_xy, point, seed, and so on.

All 120-odd functions have been optimised to make them as fast as possible in use, with the result that Sage software, considering it will be running on 340x0s, should achieve blistering speeds.

Direct access

Many functions allow direct access to the built-in 340x0 hardware calls, enabling hardware clipping, animation, and a host of other advanced operations. The user can also develop his or her own libraries and executable functions utilising the 34082's rendering engine so that as much of the time-intensive 3D process as possible is taken care of by the hardware.

Libraries written specifically for the Rembrandt board will include support for multiple monitor setups, for those huge video displays you see at rock concerts, parallel processing routines and alpha channel control of video effects.

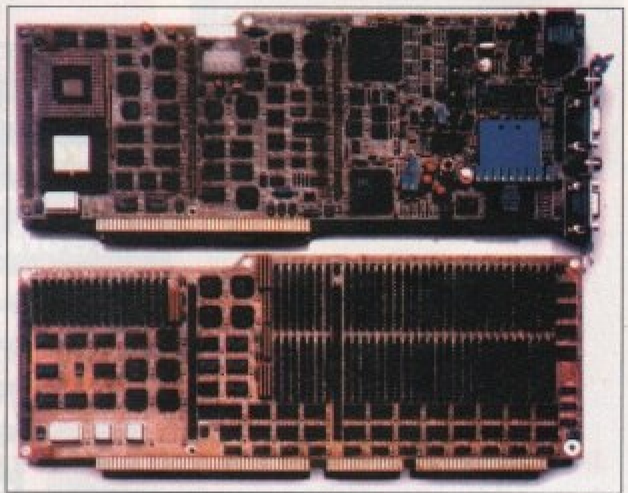
A new DMI Resolver board offering spaces for up to four 340x0s which, incidentally, will happily work in parallel, is claimed to be 15,000 times faster at rendering a 3D object than a standard Amiga. This sort of performance opens the way for real time 24-bit animation and the most impressive virtual reality systems you could ask for. And there's more.

Industries which require high level 3D modelling, such as the pharmaceutical, medical, and defence sectors to name but a few, form one market-place which the Amiga has hitherto failed to penetrate and on which PPS and DMI have their sights firmly set.

With the sort of raw power available through Sage-type graphics boards, the Amiga becomes the ideal low-cost platform for some of the most advanced applications in the world. With the cheapest pseudo-24-bit cards costing more than a good hard drive, most home users will be unaffected by the 24-bit revolution. However, as more and more people buy DCTVs or AVideo cards, and as the high-end manufacturers get their acts in order, the Amiga could snatch an ever-increasing share of the TV and video professional market.

Standards like Sage might not be the panacea the manufacturers would have us believe, but they should help avert a situation where we can't see the graphics for the graphics cards. AC

For more information on Sage, and details on the soon-to-be-released developers' pack, contact Progressive Peripherals on (0101) 303 825 4144 or Digital Micronics on (0101) 619 931 8554.



The Rembrandt board offers unparalleled graphics power at the relatively low price of $3,995

Why a new standard?

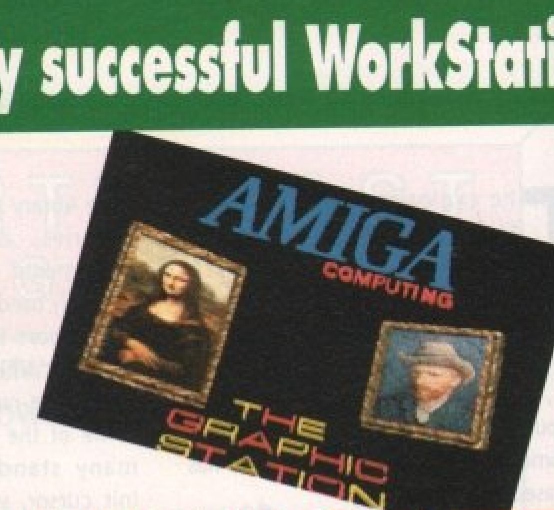
The Amiga 1000 was released in 1985 and its 4,096 colours were a show-stopper. Since then, however, Commodore have allowed the official standard for Amiga graphics to languish at its now seven-year-old level.

A standard PC in 1985 might have been using EGA or CGA to produce 16-colour graphics. The standard PC in 1992 is using 256 colours from a palette of 256,000 and the latest cards, costing not much more than £100, can offer 32,000 colours onscreen without the sort of HAM-style fudging used by the Amiga.

In effect, the Amiga is a 32-colour machine which can employ extra halfbrite (EHB) or hold and modify (HAM) trickery to produce extra colours. For most software, however, this sort of messing around slows things down too much, and HAM is virtually useless for anything other than static backdrops in any case.

Third-party manufacturers are now producing their own standards, albeit with Commodore's blessing, and Commodore seem set, at long last, on upgrading the standard Amiga's graphics later this year. The A4000 should have at least 16-bit graphics, possibly 24-bit, and there are rumours at large about the possibility of a Super VGA-style graphics card for all Amigas. If this happens, it will be the biggest thing to hit the Amiga scene all year, and will advance the Amiga's cause much more effectively than any 68040 card could ever hope to. Watch this space.

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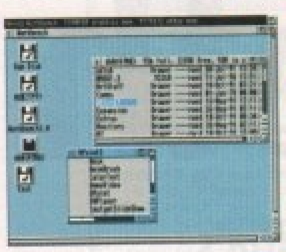
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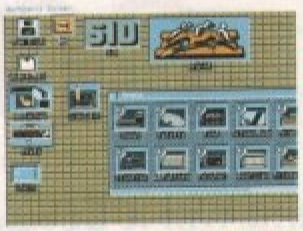
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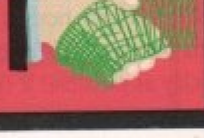
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From the magazine that brought you the WorkStation



ABSOLUTE beginners

PART THREE

Stevie Kennedy creates an auto-booting disk from the ground up

As the Absolute Beginners series progresses, I'll be stopping now and then to take a quick look at the ground we've covered so far in case anyone is feeling a bit lost or has just joined our AmigaDOS tour bus. This is as good a time as any to review what we've learned over the past two months.

Our first instalment introduced the Workbench environment, double clicking on icons, opening drawers, and getting to know the menu options available. From this lesson, readers should have grasped the basics of creating new drawers, renaming them, dragging icons around the screen, and most of the usual "click-and-point" Workbench operations.

Part two of the series concentrated on the essential directories most AmigaDOS disks contain and, briefly, the way these are used by the Amiga when it boots a disk. We also looked at how to LIST the contents of an entire disk, how to find information on the size of files and how much space there is left on a disk.

Over the next few months we'll look at groups of AmigaDOS commands one after the other and examine how they work in relation to some practical project. Before we begin such a detailed examination, however, we'll find out how to put together the most basic auto-booting disk.

Starting with a fresh floppy, or one whose contents you can safely trash, our disk will have to be formatted and equipped with the directories and files AmigaDOS needs to load a minimal Workbench. The first job, then, is to format the floppy.

Most of what we'll do from now on will happen in the Shell, so double click on the Shell icon and wait for your input window to appear. Once it has, drag the window out to full screen size using either the drag gadget in the bottom right-hand corner (WB1.3) or the shrink/expand gadget in the top right (WB2.04).

Now type the command:

```
FORMAT DRIVE DF0: NAME MYDISK
```

and insert your fresh floppy when the Amiga asks for it. Try not to format your Workbench disk! Once the format is complete, eject MyDisk and re-insert your Workbench disk ready to start the construction job. If you have an external drive, now is the time to put MyDisk in it to save you a lot of disk swaps later on.

I'm afraid that single drive owners will be forced into quite a bit of faffing around with disk swaps. This is unavoidable when you copy files from one disk to another on such a system. The only remedy is to purchase a second floppy drive.

Generally, as long as you tell the Amiga the name of the disk you are trying to copy something to, it will ask for that disk by name and wait until you insert it. If you study the commands we'll be using, you'll notice that we always refer to "MyDisk:" instead of just "DF1:" or "DF2:", which should make life a bit easier for single drive users.

Automatic

Don't forget that a disk's name contains both its identifier (MyDisk) and its device symbol (the colon ":"). When you name a floppy, you don't have to add the colon – Workbench automatically refers to "MyDisk" as "MyDisk:" when reading data from it or writing to it.

Similarly, all system directories are treated in the same way. The DEVS directory is called "DEVS:" by AmigaDOS, because it is one of those essential directories on an AmigaDOS disk. If any of this still causes you to wake up at night in a cold sweat, take another look at last month's column where we covered the subject of such "logical devices" in more depth.

For now, double drive owners can ignore many of the references I'll make to disk swaps, as the rest of the column will be angled at those stuck with only one flexible friend. With MyDisk in your second drive, Workbench will always have "MyDisk:" available and will never ask for it.

To make a start, now that Workbench is safely back in the internal drive, we'll copy the commands we are going to use to the RAM disk. The reason for this is that it will cut down on disk swaps and hassle, so type the following commands one at a time:

```
CD C:
COPY COPY TO RAM:
COPY MAKEDIR TO RAM:
COPY INSTALL TO RAM:
```

Users of older Workbench 1.3 Amigas will also have to type:

```
COPY CD TO RAM:
```

because the CD command is not built in to the older machines as it is in the new A500 Plus.

Now type CD RAM: to make the RAM disk our current directory. If you've followed things so far, the commands CD, COPY, MAKEDIR, and INSTALL will be available direct from RAM:, which will have the secondary effect of speeding things up, as they won't have to be read in off your Workbench disk every time they're used.

For a basic disk, you'll need three system drawers. These are "C", where

➤

This month's jargon

Script file

An Ascii text file of any size which contains a series of AmigaDOS commands. Script files can be thought of as primitive programs, but they're best treated as an automatic way of entering a lot of commands at the Shell.

Ascii

This stands for the American Standard Code for Information Interchange, and is the internationally accepted standard for text files. Amigas, STs, Macs, and PCs all support Ascii text, and all wordprocessors and text editors can save files in Ascii format.

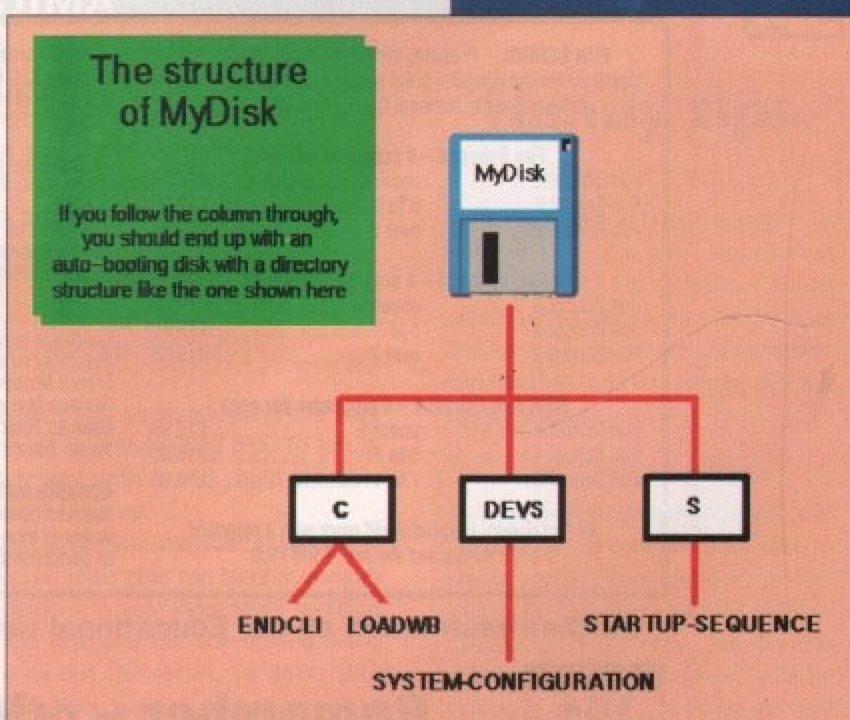
Ascii text contains no formatting information such as bold text, underline and so on – it is just raw text in the form of code numbers which stand for the same letters on most keyboards.



You can take the easy way out if you use something like SID, but there's no substitute for a good grounding in Amiga dos



LIST MYDISK: ALL should look like this



The structure of MyDisk

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ABSOLUTE beginners

AmigaDOS commands are kept, "DEVS", which contains your system-preferences file, and "S", which holds the startup-sequence.

You should be familiar with these files if you followed last month's column, but to recap, the system-configuration file contains preferences settings such as your screen colours, and the startup-sequence is a file of commands executed one at a time when the Amiga boots up.

Whoa! What's all this about startup this and system that? If you're feeling confused, think of the startup-sequence as just a series of commands you would type in at the Shell, because that's all it really is. It is a text file you could edit or create in a wordprocessor or text editor.

Files of this kind are called "batch files" in the typically romantic PC world, because the commands in the file are dealt with as a batch. In Amiga circles, they're usually referred to as "script files". It doesn't matter what you call them as long as you don't confuse yourself.

Back to the construction site! Create the system directories I mentioned earlier by inserting MyDisk in the internal drive and typing:

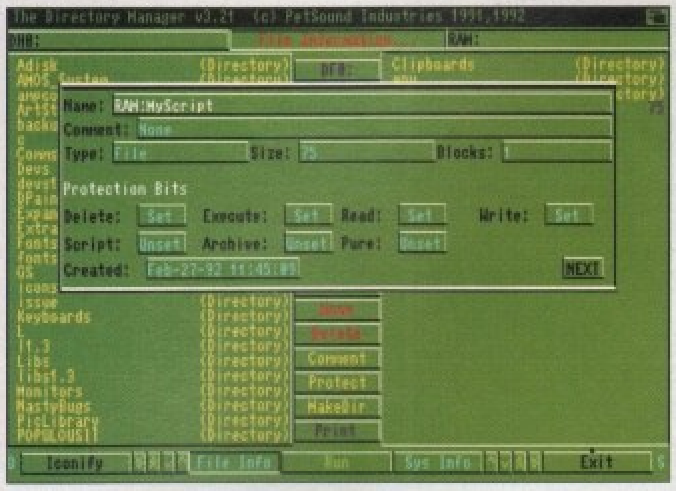
```
MAKEDIR MYDISK:C
MAKEDIR MYDISK:DEVS
MAKEDIR MYDISK:S
```

If you cast your mind back to last month's column, you'll remember that the first thing the Amiga does when you put a new floppy in the drive is check the boot block. Our formatted disk will have a boot block full of garbage, but it will need a proper AmigaDOS boot block.

The command to create such a boot block is INSTALL. To use it, type:

```
INSTALL DRIVE DF0:
```

If MyDisk is still in the internal drive, the boot block will be installed in a second or two.



You can use TDM from the GraphicStation to make life easier

Right, we've got a formatted disk with the correct boot block and three empty system directories. Our next job is to fill those directories with just enough files for the disk to boot. Replace your Workbench disk in DF0: and type CD SYS: to make it your current directory. Now type:

```
COPY DEVS:SYSTEM-CONFIGURATION TO RAM:
COPY C:LOADWB TO RAM:
```

Workbench 1.3 owners will also have to type:

```
COPY C:ENDCLI TO RAM:
```

as, unlike WB2.04 users, they don't have the ENDCLI command built in to their machine's Kickstart ROM.

Notice that we don't have a startup-sequence yet? This is easily accomplished with the command:

```
ED RAM:startup-sequence
```

The Workbench text editor will attempt to find a file in the RAM disk called "startup-sequence", and when it doesn't find one, will create it as a blank file and open it for you to add some text.

We'll only need two lines for this file. They are:

```
LOADWB
ENDCLI
```

Type these in at the top of the ED screen, then save the file to RAM. To do this on an old Amiga, press the Esc key, then X, then Return. On WB2.04 Amigas you can select Save from ED's Project menu.

As we forced ED to open a blank file called RAM:startup-sequence in the first place, the new two-line text file will be saved automatically with the correct name.

You have just created your first custom startup-sequence, but before you start congratulating yourself, you'll have to copy it to where it's needed, which is the MyDisk:s directory. Type CD RAM: to go back to the RAM disk, then type:

```
COPY SYSTEM-CONFIGURATION TO MYDISK:DEVS
COPY LOADWB TO MYDISK:C
COPY ENDCLI TO MYDISK:C
COPY STARTUP-SEQUENCE TO MYDISK:S
```

After all this, you should have the bare bones of an auto-booting disk. To test it, just reboot with it and you'll see how quickly it boots up.

This is because the startup-sequence, which on some disks can be of mammoth proportions, is very short. We'll be filling up the disk and the startup-sequence throughout the series, so don't lose MyDisk if you want to make the most of future columns.

Let's take a look at what we've just put on MyDisk. The ENDCLI command is a simple device for closing Shell or CLI windows, and is built into Kickstart 2.04. Only those of you with Kickstart 1.3 should have the command in MyDisk's C: directory.

LOADWB is the aptly-named command to load Workbench. If this sounds strange, considering it is such a small command – 1k or so – remember that what you see on your screen is largely thanks to the built-in libraries and system resources to be found in your Kickstart chip.

The menus at the top of the Workbench screen, for example, are generated from hardware when the LOADWB command tells Kickstart to do so. LOADWB is just a trigger for the Kickstart ROM to load system resources into memory.

Activated

What happens when your newly constructed startup-sequence executes is that the basic Workbench resources are activated, then the Shell window in which startup-sequence was executed is closed down so you can see the Workbench screen that's just been activated.

If you wanted to keep the Shell window open once Workbench is loaded up, you'd simply remove the ENDCLI command from your startup-sequence. Alternatively, you can put a semicolon in front of it, which tells AmigaDOS to ignore everything else on that line. This is a handy way of quickly altering your AmigaDOS scripts, as you can restore the startup-sequence to its original form by just removing the semicolon.

I've waffled on just about as much as I dare on the subject of auto-booting disks. It will all seem a bit complicated at first, but then so did setting up your VCR to record Dallas. Try it a couple of times, and you soon get the hang of it.

Next month we'll take the first steps towards filling MyDisk with our favourite commands and utilities, and in the process examine the Workbench devices and libraries from closer range. AC

This month's commands

ENDCLI – This is a simple little command which is used to close a Shell or CLI window. WB2.04 users don't need it as they have close gadgets on their Shell windows, and ENDCLI is built in to Kickstart in the first place.

INSTALL – A command for writing an AmigaDOS boot block to the disk of your choice. Use it by typing the command:

```
INSTALL DRIVE DFn:
```

Where n is 0 for your internal drive or 1, 2, and 3 for external drives.

LOADWB – A very small command which tells Kickstart to load a Workbench screen. It acts as a simple triggering mechanism, and all the real work is carried out by Kickstart.

MAKEDIR – Used to create a new directory (drawer) in the current directory. The new directory won't have an icon, but in all other respects it is identical to any other drawer on your disk. You can use MAKEDIR to create a new drawer anywhere on the disk by typing the complete pathname. For example:

```
MAKEDIR DH0:UTILITIES/VIRUSKILLERS/BOOTX
```

would create a drawer three levels down into the directory structure.

Handy tips

Use the semicolon, Luke!

When you alter a startup-sequence to take out a line, just put a semicolon at the start of the line. When an Amiga sees a semicolon, it skips to the next line, so you can keep the old command and reactivate it at any time by deleting the semicolon.

Your own script file

If you're feeling adventurous, you can assemble all the commands we used to create MyDisk in a single script file, which you can then EXECUTE to automatically produce a blank, auto-booting disk any time you need one. We'll be looking at the EXECUTE command later in the series.

stereo MASTER

When you are considering purchasing a sound sampler there are plenty to choose from. Why compromise? your choice should be the new full featured STEREO MASTER for the Amiga, with software that is designed from our top selling Amiga sampler AMAS and a package that gives you more extras than a M series BMW. By purchasing this state of the art product which combines a quality sampler with the expertise of over 10 years of software programming, you are purchasing a top quality product with the knowledge that it is not only compatible with existing Microdeal products but will also be with future ones.

What is Stereo Master

Stereo Master is a low cost, high quality sound sampler for the Amiga range of computers. The sampler cartridge included in this package plugs into the printer port at the rear of the computer and allows you to analyze the sounds coming in from devices such as Personal Cassette Players, Compact Disc Players etc, or change the way they sound using the Real Time Special Effects or record them. Once in the computer STEREO MASTERS unique editor will enable you to edit the sound in practically any way you can imagine. Once you have the sound sample how you want it, you may incorporate it into your own Demo's or use STEREO MASTERS own built in sample sequencer to play back the sample in sequence with other samples!



MAIN SCREEN

The Sampling Software

Every feature you would expect to find in a professional editing suite including:

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- Mix sample with full or half volume
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- Fade in/out with selectable degree of fade
- Filter sample with soft/medium/hard filter
- Selectable trigger volumes
- Record frequency from 3.0 to 55.9 Khz
- Full editing and control facility for left/right channels
- Playback volumes
- Decrease volume
- Increase volume
- Bounce sample
- Paste sample
- Trigger recording
- Clear left/right samples
- Loop sample



THE SPECIAL EFFECTS CONTROL PANEL

The Special Effects Software

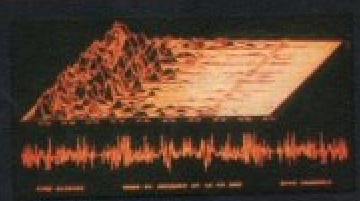
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- Fully programmable special effects so that customised effects can be recalled

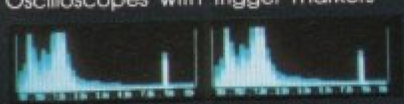
The Analytical Software

A whole host of pro-type analytical functions include;

- 3D display of sample frequencies (Fast fourier transform)
- 3D display also includes 2D envelope display plus sample information.
- Built in Stereo spectrum analyzer
- Stereo Oscilloscopes with trigger markers



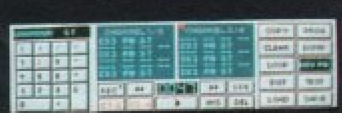
3D DISPLAY OF SAMPLE FREQUENCIES (FFT)



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THE SEQUENCER CONTROL PANEL

The Sequencing Software

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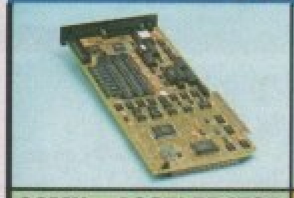
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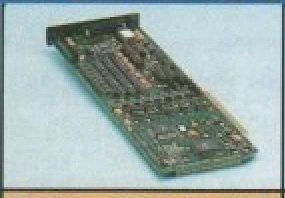


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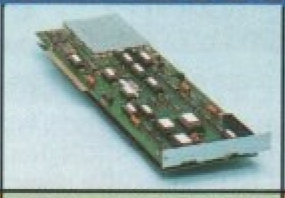


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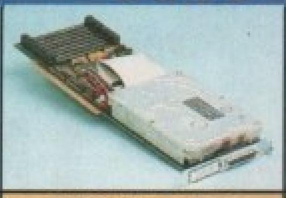


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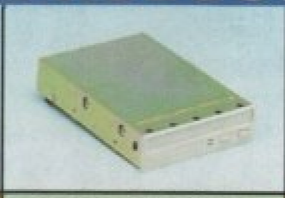


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amiga almanac

Catching the

Alex Gian hots up the pace with a look at ARexx's handling of strings

In the last two articles we saw an outline of the elements of ARexx, and how to use functions and macros to make programming easier and more "modular". Now we will look at the strongest feature of ARexx, its handling of strings.

A string is simply any sequence of characters (bytes). Whereas many languages handle different data types – integers, floating point numbers, characters and so on – in different ways, ARexx has only one kind of internal structure to store data – the simple string. Now, treating all data as strings does slow down computation a little bit, but it has the advantage of making data handling very easy!

Every single data unit, whether you mean it to be a number, a word, a sentence, a 4-byte machine address or the contents of a whole file, is stored by ARexx as a string. The operations that can be done on ARexx strings are very basic, and easily understood.

Much like their more worldly counterparts, strings can be strung together to form longer ones (concatenated), cut up into smaller bits, or have themselves (or a part of themselves) measured.

Operations that perform arithmetic or specific system jobs on data must first convert them to a suitable format. However strings are very well suited to doing any kind of text operation, and here ARexx really comes into its own.

The instructions and functions provided by ARexx will let you perform just about any operation you care to name on a string except, perhaps, tie it in knots. These operations make string processing extremely easy, whether you are preparing command strings for AmigaDOS, reformatting a data file, or preparing text data for display.

The only thing you have to bear in mind is that ARexx strings are limited to a maximum length of 65,536 bytes. Longer strings must be stored in more than one variable.

Here we will deal with two extremely useful aspects of ARexx string handling – built-in functions and parsing. They are easy enough for beginners to grasp their elements in a very short time.

Function operations on strings are numerous functions that act directly on strings. They measure them, compare them, search them for elements, transpose them, reverse them, and join them up.

Length(string), Compare(str1,str2), Delstr(str,elementno [,length]), Index(str,pattern [,fromposition]), Lastpos(pattern,str[,fromposition] and Trim(string) are some of them.([] denote optional args).

Basic programmers will also recognise Left(str,len) and Right(s,l), which return the left and rightmost elements of a string. Experiment with them and use your imagination.

In addition there are functions that treat a string as a sentence, and perform operation on the individual words, rather than the characters. Examples are Subword(str,pos,len), Word(str,nth) and Wordlength(str,nth) etc.

Here we will use the function Words(str), which returns the number of words in a string, to write a very simple word-count macro. It is not a very sophisticated program, eg it does not check that the file is indeed a document, and is limited to files under 64k, but considering that the core program is just over one line long, who's complaining?

You could enhance this program and perhaps add a file-requester like the one described below, to make it really useful:

```
/* wordcount.rexx */
arg path              /* the file to search */
open(myfile,path,'read')    /* open file for
read */
string = readch(myfile,65535)../* read in 64k or
less chars */
say "There are " words(string) " words in this
document"
```

That's all there is to it.

Parsing is the process by which data – in this case, strings – is read meaningfully and placed in some sensible order. In ARexx there are various sources for a parsed string, and also a number of different ways of parsing.

The most general form of reading a string meaningfully into variables is the PARSE instruction. It is very flexible and powerful, and we will look at it in some detail. It is used as follows:

```
PARSE input-source-keyword target-template
```

This is a lot simpler than it may appear. First, the instruction needs a keyword that specifies where the input string is coming from. Without this keyword it is invalid. The acceptable input source keywords are PULL, EXTERNAL, ARG, VAR, VALUE, SOURCE, NUMERIC and VERSION.

PULL indicates that the input string is read from the console. EXTERNAL has practically the same meaning. By the way, you can specify a console prompt when a string is PULLed by using the OPTIONS instruction with the keyword PROMPT – remember we used OPTIONS RESULTS last time to pass the value returned by a command to the variable RESULT. Try this:

```
rx "options prompt 'Yes, o master? ' ; parse
pull a "
```

ARG means the string is the argument supplied to the command or function. VAR followed by a variable's name indicates that the input is the string of the variable itself, ie if a = "hi" then:

```
PARSE VAR a b
```

makes b = "hi".

VALUE is used to indicate that the parsing string involves an evaluation. WITH is used to separate the expression being parsed from the template, for instance:

```
PARSE VALUE a WITH b
```

string fever

Interprocess communication

Let's look at an example of using a program with an ARexx interface. The program is ClockDJ, a freely distributable utility whose main job is to accelerate the mouse, provide a clock and manage screens, windows and so on.

However it also has a number of interesting features, including the provision of two file requesters, a "Yes/No" requester and a key mapping function, all controllable from ARexx.

We have found the keymap function extremely useful, as we maintain two separate keymaps, one with utility material, address strings and so on, and one with a customised keyboard to save typing when we are programming.

Using the custom command LOADKEYS we can switch at will. Of course we could have created proper Amiga keymaps, like those used in the startup-sequence by SetMap. That would have been theoretically faster, but like this we can change the keymap at any instant, simply by editing the ClockDJ keymap file, and reloading it.

ClockDJ is a quite a large program, and takes up a bit more memory than it should, but its excellent features make it worthwhile. In any case it will be very useful even if only from an experimental point of view. Read its documentation for full details of what it can do, and have fun experimenting.

Finally, we will look at a little macro that adds the CED requester supplied by ClockDJ to our wordcount program above:

```
/* Wordcount.rexx v2 with filereq! */
OPTIONS RESULTS   /* we need a result from the requester */
ourCD = pragma(DIRECTORY)
/* Don't worry too much about this, it is an ARexx function */
/* that returns the current directory from which the script */
/* was launched. We will use it to get our requester to open */
/* in this directory. If you want, you could have a condi- */
/* tional test for an argument supplied to wordcount and set */
/* ourCD to that.                       */
ADDRESS CLOCKDJ  /* All commands will now get sent there */
SETCEDDIR ourCD  /* Sets the opening dir. of the filereq. */
SETCEDTITLE "Choose document file to wordcount:"
CEDREQUESTER                 /* Display the requester */
open(file1,RESULT,'read') /* RESULT is returned from the req.*/
len = words(readch(file1,65535))  /* Read in and count file */
say "There are " len " words in file" ; close(file1)
exit
```

OK, in what language can you do the above operation quicker? If you do not want to have to set up an ADDRESS, and send all the commands every time you want to use the file requester, you can even write a function – myCED() – which could accept as arguments any value you wanted to change, such as the title, current dir and so on.

It will do this automatically, and store it in your REXX: directory. You could then call the file requester from any ARexx program, simply by calling, eg:

```
myCED(title,curdir,size,...)
```

is a trivial example that has the same effect as the example in VAR above. VALUE can be used to great effect when the parsed string itself contains information as to how it should be parsed – we will not look at it in too much detail now.

Finally, SOURCE, NUMERIC and VERSION are used to parse specific information about the system.

PARSE SOURCE comORfun resORnot places info on whether the program was called as a function or as a command in the first variable, and whether it returns a value or not in the second.

PARSE NUMERIC digits fuzz form yields information on the numeric status settings, and PARSE VERSION ARexx version cpu mpu video frequency gives information on the current version and the system.

The instruction may also take the optional keyword UPPER. This converts the input string to uppercase. If used it must be the first keyword specified. In fact, the PULL and ARG instructions, which we have already seen in previous articles, are just shorthand for PARSE UPPER ARG and PARSE UPPER PULL.

The last part of this instruction, the "target-template", will specify what is to happen to the input string. It may be as simple as a single variable into which the whole input string gets copied, or quite a complex structure with many variables, each receiving some specified part of the string.

There are three ways to parse a string. They have jargon names, but don't let this put you off. We will illustrate them here with examples that should make their use very clear. When Parsing by tokenisation, the string is parsed into the supplied tokens.

Let us assume that the argument to a macro is the string "Hello there, everybody":

```
Parse arg a     /* a is now "hello there,
everybody" */
Parse arg a b    /* a is "hello", b is "there,
everybody" */
Parse arg a b c  /* a is "hello", b is "there," c
is "everybody" */
```

Any blanks in the source string are lost when we parse by tokenisation.

Parsing by pattern matching is when specific characters that are known to occur in the source string are used to separate the elements. For instance in our previous example:

```
Parse arg a "," b "bo" c /* a is "hello there", b
is "every", c is "dy" */
```

Parsing by position is probably the easiest of all to understand in theory, although the notation may be a bit tricky at first. Basically all you are doing is specifying the string positions to use. Here are some examples. Assume str = "abcdefghijklmnop":

```
Parse var str 1 a 4 b 7 c 15 d  /* a is "abc" b
is "def" c is "ghijklmn" d is "op" */
```

Here the numbers act as absolute position markers between which the numbers are read. Another example:

```
Parse var str 5 a 9 12 b 14 /* a is "efgh" b is
"lm" */
```

The above examples are with absolute numeric values, but we could also have relative values – the notation for this is a + or - prefix:

```
Parse var str 2 a +3 b +6 c -2 /* a is "bcd" b
is "efghij" c is "ijklmnop" */
```

An = prefix indicates absolute position, and can be used in evaluated positions.

Here is a useful illustration of a combination of the above methods. Suppose you have a variable called path which contains a string that is a full AmigaDOS file specification, such as:

```
"DF0:subdir1/subdir2/subdir3/ourfile"
```

You can easily get the device name if you pattern match the ":", and you could then do an iterative loop to pattern match every "/", until you got the name of every subdirectory and of the file.

This method is acceptable, but if you only want the name of the file you are doing a lot of extra work for nothing. Since the purpose of ARexx is to make things easy, there is a quicker way. Use the Lastpos() function to get the position of the last "/" in the string and then read the value from that position onward. Here's what it looks like:

```
mark = lastpos("/",path)
Parse value path with dev ":" subdirs =mark
filename
/* now dev is "df0", subdirs is
"subdir1/su...bddir3/" and */
/* filename is "ourfile" */
```

Next time, we will look at the control structures and also use ARexx to create some graphics

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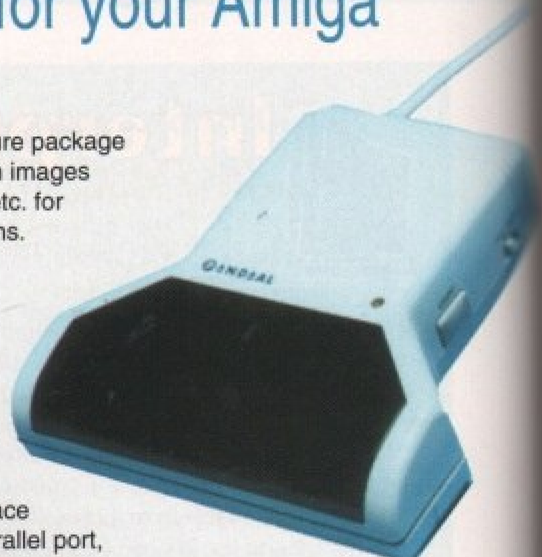
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Videophile's guide

Paul Austin's hints and tips, dos and don'ts and essential info – a dab hand guide to DTV...

It's about time we held out the olive branch to the newcomers and presented the definitive guide to the art of Amiga-based desktop video.

For regulars this may sound like a case of teaching old dogs old tricks. Nevertheless, the old guard could still be in for the odd surprise as we run down the essentials and desirables which the would-be videophile needs, or should be looking to aspire to in the future.

The good news for the average beginner with no more than a basic Amiga and the associated free software is that they already have the necessary kit to produce impressive video graphics.

To get your foot in the door, all you require is a modulator, DPaint, a video and a suitable length of phono cable – assuming your video supports phono – with which to connect the Amiga, modulator combination and the aforementioned VCR.

The Amiga is the machine for video applications, used by amateurs and broadcast-quality professionals the world over. The only difference between you and them is the amount of cash spent on enhancing the output of the machine, whether that be through expensive hardware or additional software.

Premier machine

A glimpse at any video magazine instantly confirms the Amiga's status as the premier DTV machine. Pages of related hardware and software fill both advertising and editorial alike in a desperate attempt to cajole the punters onto the one true path. A case of the blind leading the blind if ever there was one...

After you've stretched both your Amiga, DPaint, and modulator combination to their logical extreme, the next job is to start on the sometimes rocky road of the upgrade path. This is where the beginner can soon become lost in a wilderness of marketing claims and counter claims, unfathomable techno-jargon and the



confusing array of available formats, which make video one of the most baffling areas of interest in the repertoire of the Amiga.

The most sensible step isn't to jump headlong into the world of S-VHS, Hi-8, U-Matic, Hi-Band and the like, the reason being that you're likely to find yourself marooned. Admittedly you can still copy your creations onto standard VHS but that defeats the object just a tad, as you're certain to lose a lot of what you've paid for in the process.

The key to success is to build up your system and software collection first. By the time you've mastered both you'll be in a position to really exploit the increased clarity that the more expensive formats can offer.

The first purchase for the majority is likely to be a titler. For the budget buyer either Home Titler from HB Marketing or The Big Alternative Scroller from Alternative Image are perfect, with TBAS perhaps tipping the balance in the quality stakes.

If you're a bit better off you could try Scala500 – an impressive if slightly light-hearted titling system. It's Ideal for home use, but perhaps a little flippant for serious documentary style productions. Having said that, it boasts a bucketful of special effects and is worth a closer look if you want more than just a bog standard scrolling message.

If you fall into the very well off bracket there's a choice of two packages, either Scala or Broadcast Titler 2. Scala is a more advanced version of its little brother Scala500. To be honest Scala isn't a true titler, it's a multimedia presentation system which does a good job of doubling as a titler.

Broadcast Titler 2, however, has no such pretentions. It concentrates solely on titling and employs its own fonts and optional effects to add a considerable amount of style to any production.

Upgrades includes extra fonts and font conversion software, which allows you to convert standard Amiga fonts to BT2's anti-aliased counterparts. The only real fault is its inability to multitask – a real problem when the software collection starts to build.

Memory question

Once armed with the basics and a suitable titler, it's tempting to delve straight into the bank account and invest in high-end software applications. Although very tempting, I strongly suggest you consider investing in some extra RAM first.

Almost all the available DTV packages rely heavily on extra RAM – even DPaint suffers badly as an animation tool without a bit more room to move. Without sufficient space you not only won't be able to apply bigger programs properly but if you do make an attempt, it's likely you'll need to employ crash editing to complete your production – not recommended.

The only potential investment that rivals the essential extra RAM is a genlock. With this particular beastie your work will really start to shine, but to find out more I'm afraid you'll have to wait until next month for the next thrilling instalment of this two-part special.

It's second nature to the Amiga

An obvious question is "what, if anything, makes the Amiga so much better than the opposition"? I'm afraid there isn't a short answer as there are a whole range of factors which make the machine ideal for the job.

Having said that, the feature which stands head and shoulders above the rest is the machine's capacity to output an interlace signal via the machine's own custom video chip. This alone sets it apart from the rest, as the PCs and Macs of this world need all manner of hardware enhancement to achieve what to the Amiga comes as second nature.

To clear the air a little, a quick paragraph on Interlace is in order. Interlace equals video and TV – it's literally that simple. Both systems rely on the interlace effect which doubles the resolution of the screen by alternating between two fields 25 times a second.

If you're unlucky enough to freeze a video at an inopportune moment, this effect becomes all to apparent as the two elements of the frozen image alternate, usually with migraine-inducing consequences. The second feature that sets the machine apart is its capacity to provide its own sync pulse. Generated internally, this is then output as part of the video signal.

Because of this priceless asset there's no initial need for an external sync pulse generator, which again is a prerequisite for DTV on other machines and an expensive addition in the form of dedicated hardware.

The final internal advantages concerns the machine's socialist architecture and its ability to multitask – two more options which the opposition can't match and at best struggle to emulate.

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All in array

Margaret Stanger looks at handling Ascii text for C programmers

This programming page is mainly for C programmers, who have been a little neglected lately. The support disk contains a program to read data from an Ascii input file, process it, and produce an Ascii output file with the data tastefully arranged for printing or display.

The input data is a file with a number of records. Each record has at least three lines of data – a name, possibly a phone number, and several lines of address. The lines vary in length, and are separated from each other by a comma, but any chosen delimiter will do. There is a newline character at the end of each record, and there can be any number of records in the file. An example of a record in the input file is:

```
---------------------------
|Damien,666,USA           |
|                         |
---------------------------
```

A large array space is made available for the data from each record. The array starts at the address buffer, and allows for up to 30 lines of up to 30 characters. The name goes into the first line, the phone number into the second, and so on.

The record in the input example would be stored in the array as:

```
---------------------------
|Damien                   | Name
---------------------------
|666                      | Phone
---------------------------
|USA                      | Address 1
---------------------------
|                         | etc
---------------------------
```

This program assumes that all the records obey the rules, and do not have too many lines or too many characters in a line. Some care has to be taken to make sure that the program is stable if the data is faulty.

Unpredictable

An extra long record must not be allowed to read in forever, as it would start overwriting code and data when it got to the end of the array – the result would be unpredictable. The extra code in the readfile() routine is to trap rogue data with an extra long line, or with too many lines.

The output routine sends data to the output file several bytes at a time. A print buffer the same size as a line of print is set up and filled with spaces. A character string to be output to this buffer can be placed exactly in the print position, and data can be lined up with the corresponding heading.

Data strings, literals and punctuation can be placed in this way and the whole line sent to the output file when it has been completed. Newline and form feed characters are sent straight to the file when required. Page, data and time information are also sent to the output file. The example record would appear on the output file as:

```
------------------------------------------------------------
|page 1                List of addresses
Mon Jan 20 13:25:43 |
|
|
|
| Name                 Phone                 Address
|
|
| Damien               666                   USA
|
|
------------------------------------------------------------
```

There is a way to pass command line parameters or arguments to a program when it begins executing. When main() is called to begin executing, it is called with two arguments. The first (argc) is the number of command line arguments the program was invoked with, the second (argv) is a pointer to an array of character strings that contain the arguments – one per string.

By convention, argv[0] is a pointer to the program name. For a program with no other arguments after the program name on the command line, argc would be 1. The program on the support disk has two arguments, so argc should be 3 if the command line has been entered correctly. Argv[0] is a pointer to the program name, argc[1] a pointer to the input file name, and argv[2] a pointer to the output file name.

The time, date and page number are written to the output file, to reduce confusion between versions and pages once the file has been printed. There are several time and date routines available from the C library. I used time() to put the system time into a long integer. This information is in the form of elapsed seconds since the start of 1970, which is not particularly user friendly.

The routine ctime() will translate the long integer containing these elapsed seconds into something a little more acceptable.

I have assumed that each line has a maximum of 30 characters, and that there are a maximum of 30 lines for each record. Most lines will be less than this, and most records will have fewer lines.

I have assumed that each line will be separated from the next one with a comma, and that there will be a newline character at the end of each record. I have given the output file an arbitrary line length of 75 characters, and page length of 20 lines.

All these constants (MAXCOLS, MAXLEN, DELIM etc) are defined at the beginning of the program so that they can be changed easily when required without disturbing any of the real code.

Those of us without real database facilities could use this software as a basis to produce Christmas card lists, address labels for envelopes, junk mail, chain letters and so on. The more serious among us could input a file full of numbers for mathematical processing, and print out the result of the calculations.

Coming soon: The long-awaited IFF file reading routine for assembler programmers.

Using the program

The program on the support disk should be run from shell or from the CLI. To run it, type:

```
fileprog file1 file2
```

not forgetting to put in pathnames where necessary.

File1 is the name of the input file to be read, and file2 is the name of the output file to be created. If there are the wrong number of arguments, a suitable message will be displayed, and the program will exit.

There is a demonstration input file, imaginatively named "infile", on the support disk. When run, the program opens the DOS library, the input file and the output file. If the library or files fail to open, the program exits via a cleanup routine which displays an appropriate message.

The header, consisting of a title, page number, date and time, is written to the output file, followed by two blank lines. The sub header, with column headings and one blank line is written to the output file.

The program reads the first input file record with its name, phone number, and an indefinite number of address lines. These items are separated by commas on the input file. The program knows it has finished reading a record when it reaches a newline character.

The name, phone number if any, and address lines are written to the output file in the appropriate column for display. If the maximum page length is exceeded, a form feed character, heading and subheading are written to the output file.

Please note that any previous files with the same name as the output file will be overwritten.

Processing the data from the input file continues until all the data has been read. The program finishes with the cleanup routine displaying the message "ok".

A new medium

CD+Midi – a ground-breaking innovation or another gimmick in the making? Paul Austin looks at the first Midi application to make the journey from CDTV

As the long-awaited CD-ROM drive finally makes its way into production, the first CD+Midi products are about to hit the Amiga. The first release has already arrived in the office – Rhapsody in Blue, the classic Gershwin creation. Unfortunately, although the disk is here, the CD-ROM drive isn't!

Nevertheless I'm assured by Commodore that this CD and indeed the entire range of CD releases are equally at home on the new drive as they are with CDTV itself.

The new format is a curious combination of digitally recorded music, Midi information and onscreen support graphics. With the new drive as with CDTV, all three are available to enhance the performance.

For the musos among us it's the music that matters, and more precisely the available Midi output. In the case of Rhapsody in Blue the disk contains four separate compositions of the original piece, each offering a slightly different combination of digitally recorded audio and suitable Midi accompaniment.

Piano arrangement

The first track offers the original four-part Midi recorded piano arrangement plus a separate Midi channel that contains a composite of the solo melody with a few other solo lines designed to complement the existing pre-recorded elements.

The second variant employs the same Midi data as the first but produces a different overall sound by assigning new voices. The Midi output is also vastly different to the first, as the entire piece is output as Midi information.

The Midi output is supplied in the General Midi format which several synths such as the Roland SoundCanvas already support. This particular track takes far more advantage of its potential Midi output by changing channels during the sequence.

In the third track, the audio element is once again an orchestrated variation. The right channel contains the complete piece, including the solo melody, while the left contains only the accompaniment. The missing solo melody is then provided in a Midi format.

If you're listening to the audio channel separately, tuning the balance from left to right simulates the addition of a Midi instrument playing the missing solo melody.

Midi channel one contains the composite melody, while channel 11 contains an enhanced piano solo designed specifically for the Roland Disklavier. This particular track is offset by about half a second in order to compensate for the delay on the Disklavier.

This allows the Disklavier to keep in perfect sync with the rest of the track. If you don't happen to be the proud owner of a Disklavier, its specific Midi data is automatically muted when you're employing other synths or modules.

On the final track, audio plays the entire four-track piano arrangement in the right-hand channel while the accompaniment appears only in the left. This variation also contains the entire performance in Midi. If you employ several Midi channels, the complete piece can then be played solely via Midi.

Channel one contains the enhanced solo piano while channels two, three and four play the accompanying piano parts. Roland's Disklavier makes another appearance – a duplicate of the data in channels one to four is copied and delayed on channels 11 through to 14, again to enable the Disklavier to sync to the existing tracks. As before, if the Disklavier isn't present its associated tracks are muted.

Each track has its own intro during which a very American voice details the ins and outs of the forthcoming track, making a total of eight tracks in all.



Gershwin's Rhapsody in Blue – the first release on CD+Midi

As far as the pre-recorded tracks are concerned, I must admit to being a little disappointed. Although I can't fault the accuracy and adhesion to the original manuscript, the actual feel of the piece does leave a lot to be desired.

Admittedly a Midi replica of a human performance will never match up as far as warmth and feel are concerned. Nevertheless, I am sure that with the recent advancements in the art of aftertouch emulation a lot more could have been made of what is widely considered to be one of the great works of the twentieth century.

The big bonus

Perhaps the biggest attraction for most of us isn't simply sitting back and watching as our Midi instruments join in with the pre-recorded elements. If that were the case, even the works of the masters would soon become as dull as the proverbial dish water.

The big bonus is surely the ability to record the Midi data as it emerges from the CD. All that's required is a suitable sequencer with the option to record more than one track at a time and you're off.

Once captured, the Rhapsody in Blue remix is only a matter of moments away. Any aspect of the performance can be isolated in the usual way, cut, pasted and generally bastardised in a manner that the dance community are all too familiar with. Perhaps CD+Midi isn't such a great idea after all...

Having said that, the possible benefits as a teaching medium are immense and if put to proper use even the dance junkies of this world might learn a few tricks of the trade and consequently move on to greater things in the future.

New releases?

Well, strange as it may seem, this bit of the article is largely up to you... After a transatlantic call to an ever-so-friendly spokesperson for Warner New Media, it transpires that future releases in the CD+Midi range are largely down to its punter appeal.

If this first release is received well, Warner will commit themselves to more releases – if not, this first release may indeed be the last.

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Chain mail

Pat Winstanley shows you how to transfer files around the country in a jiffy – not in a Jiffy bag!

Most people get their first taste of comms when two friends link their computers with a serial cable to play games such as Populous against each other. When it comes down to it, all the fancy modems, bulletin boards and assorted jargon of the comms world do no more than this – they just cost more.

The principle of comms is swapping information between computers without having to physically take a disk out of one machine and put it in another. By wiring the machines directly or remotely, otherwise incompatible computers can exchange data easily and quickly.

For instance, passing text files from your Amiga to a friend's Mac is a bind if doing it on disk. However, link the two machines either directly by cable or remotely by modem and files can be squirted backwards and forwards in a jiffy rather than a Jiffy bag.

The first thing you need is some sort of communications software which will enable the machines to talk to each other and understand what's being said. In games such as Populous this software is built in to the program already and specifically set up for that game.

For more flexibility you need a separate program such as Ncomm. This allows all sorts of adjustments to enable you to match your computer exactly with the one at the other end of the line.

Bewildered

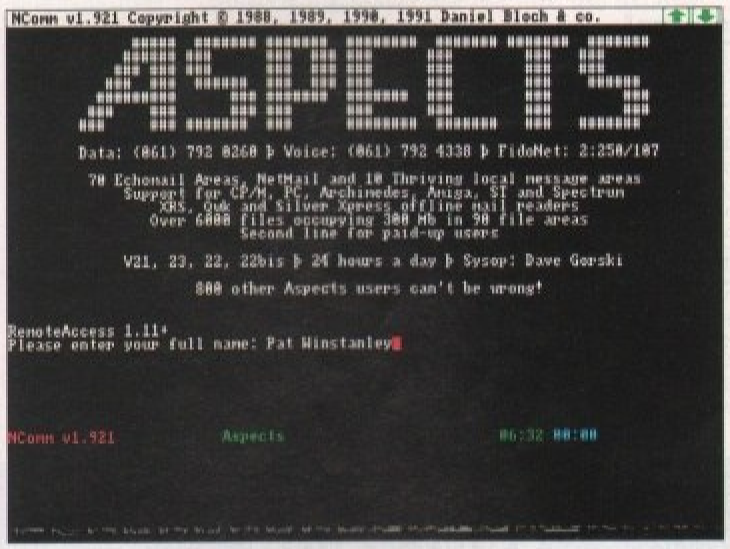
Everyone is bewildered when they start with all the jargon such as baud, bits, parity and so on, but there's no need to understand what the terms mean in order to set the correct values.

All you need in order to dial up a bulletin board is the phone number. When you connect you will be given any extra information you need to optimise your own settings.

Modems too are often talked about in terms of mystique. What with jargon such as V22bis, HST, MNP correction and so on bandied about, it's easy to lose sight of the fact that a modem is simply a box which connects your Amiga to the telephone line.

As a beginner you don't need to spend much on a modem. If all you are likely to do is potter around on your local bulletin board for an hour a week then speed is relatively unimportant.

It only really comes into play when you start downloading and uploading games and other programs. Even then you need to work out whether the capital cost of a high-speed modem is likely to be recouped over a reasonable period by correspondingly lower phone bills.



The logon screen gives all the details you need to get started. Don't worry about the jargon – it's much easier than it looks. Most boards also give a list of numbers for other local BBSs

Right then, you've bought a cheap second-hand modem for under a hundred quid, found some comms software to go with it and connected everything up to the telephone line. Where do you go from here?

A good introduction to comms is your local bulletin board system (BBS). These are usually run from somebody's home with some sort of personal computer, a hard drive to store information, and special software to allow the system to run as a host. The person running things is the system operator (sysop) and his or her word is law while you are a guest on the system.

Etiquette is all important here as most boards are run at the sysop's expense. If you start abusing that generosity you are likely to find yourself barred from the system altogether.

So what's the etiquette? Basically it involves putting as much into the system as you take out of it, obeying any local rules for logging off and generally not making a nuisance of yourself to either the sysop or other board users.

Most boards have a good selection of PD and shareware available for download but it's poor practice to simply copy everything off the board and put nothing back.

If you don't have any new files to send up to the board you can contribute by becoming active in the message areas which are like giant letters pages. These are either local to a particular board, or part of a large network covering the whole country where sysops of different boards pass their daily messages on to the next board in the chain, and receive a similar batch from another board.

For instance, this morning I read a message on my local board – Aspects in Manchester – which had been routed to me from Scotland. At this moment there is a reply from me waiting to head back where it will probably be read tomorrow.

Although it usually costs nothing except telephone time to log on to a BBS, you will often be granted extra privileges if you donate a small amount to the sysop. It's a good idea to do this anyway since he has to pay his phone bill too!

For about £5 to £10 you are likely to have an extended time limit on the board, more download facilities and the glow of knowing you are an active part of the community. It's rather like the concept of shareware – try it for free, then if you like and continue to use it, make a contribution to the originator.

While bulletin boards are run on an amateur enthusiast basis – albeit in a very professional manner – there are also more businesslike boards available all over the world. These conferencing systems unfortunately cost money. In addition to telephone charges you also have to pay a charge to the system for the amount of time you spend on line.

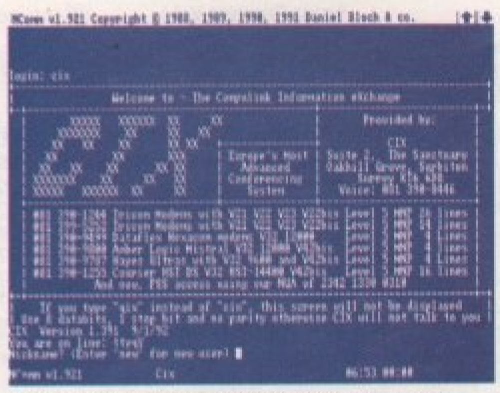
Uneconomic

However, many facilities are available which are simply uneconomic for smaller boards. For instance, when I've finished this column, it and the illustrations will be sent via a private mail system direct to *AC*.

Because of the privacy, business users can be sure of confidentiality – something lacking on BBSs. Messages can be sent all over the world, although this incurs an additional small charge.

Within the system itself are many conference areas covering everything from model rockets to Cray simulators on the Amiga (I kid you not!). *Amiga Computing* has an Ezra conference and competitor magazines also have their own areas.

These are open conferences – anyone can join – but many conferences are closed. To join a closed conference you must contact the moderator (like a sysop) and ask to be allowed in. But beware! Comms can be an addictive hobby, and very expensive if you don't take care.



Plenty of numbers to call here, depending on your modem. Even so, certain times are pretty busy with around 6,000 subscribers trying to get a look in. Charges are around £2 to £3 per hour plus BT costs, depending on the time of day

Progressive Pacman

Peter Hickman shows how our Pacman game can be rewritten in AMAL

Welcome to another in-depth look into the world of AMOS programming. According to my hard disk this is article number 20, so it's a bit of an anniversary for me.

If you can cast your mind back a couple of months, we were playing around with simple Bob movements using AMOS. Our goal was to create a small Pacman game, which we did. Now we will look at a different method of creating such a game, using the AMOS sub-language AMAL.

We took a look at the major AMAL functions in the last issue so I won't be going into too much fine detail concerning the basic functions. Instead we will concentrate on the structure of an AMAL program.

The first thing to do is load in the Bobs for the game and set up our default screen stuff. If you are unsure how to get these Bobs loaded in – trust me when I say it's not quite as straightforward as it sounds – look at the box on this page which contains strict instructions on how to make maximum use of your *Amiga Computing* CoverDisk.

```
Load "GAME_SPRITES.ABK"
Screen Open 0,320,200,16,Lowres
Curs Off
Flash Off
Cls 0
Get Sprite Palette
Double Buffer
Autoback 0
```

Now comes the time to define our AMAL string. As you can see, I have built the program up into the string A$. AMAL ignores spaces so I have taken advantage of this to produce a clear piece of code which is easy to look at and – hopefully – to understand.

This first line sets up a label "Start:" and after a brief pause stores the current joystick value in the register R0:

```
A$="  Start: Pause ; Let R0=J1  ; "
```

By using comparisons we can then jump to routines depending on the current joystick action. As I have said before, the numbers returned by the joystick are 1=up, 2=down, 4=left, 5=right and in turn 9=up plus right (8+1=9), 6=down plus left (2+4=6) and so on.

```
A$=A$+"    If R0&8 Jump Right ; "
A$=A$+"    If R0&4 Jump Left  ; "
A$=A$+"    If R0&1 Jump Up    ; "
A$=A$+"    If R0&2 Jump Down  ; "
A$=A$+"    Jump Start         ; "
```

The next four routines perform the actual movement of the Bob – for more details of how the Move command works see your AMOS manual.

```
A$=A$+"Right:             ; "
A$=A$+"    Move 10,0,2    ; "
A$=A$+"    Jump Start     ; "
A$=A$+"Left:              ; "
A$=A$+"    Move -10,0,2   ; "
A$=A$+"    Jump Start     ; "
A$=A$+"Up:                ; "
A$=A$+"    Move 0,-10,2   ; "
A$=A$+"    Jump Start     ; "
A$=A$+"Down:              ; "
A$=A$+"    Move 0,10,2    ; "
A$=A$+"    Jump Start     ; "
'
For LOP=1 To 15
  Bob LOP,Rnd(150),Rnd(100),1
  Channel LOP To Bob LOP
  Amal LOP,A$
Next LOP
'
Wait Vbl
Amal On
'
Direct
```

OK, so you don't want to structure your AMAL programs, you could shorten them by just using the UPPERCASE characters. Just look at the following AMAL string. If you value your sanity, don't try to type it in!

```
A$="S:P;LR0=J1;"
A$=A$+"IR0&8JR;"
A$=A$+"IR0&4JL;"
A$=A$+"IR0&1JU;"
A$=A$+"IR0&2JD; "
A$=A$+"JS;"
A$=A$+"R:;"
A$=A$+"M10,0,2;"
A$=A$+"JS;"
A$=A$+"L:;"
A$=A$+"M-10,0,2;"
A$=A$+"JS;"
A$=A$+"U:;"
A$=A$+"M0,-10,2;"
A$=A$+"JS;"
A$=A$+"D:;"
A$=A$+"M0,10,2;"
A$=A$+"JS;"
```

Having fun? I hope so! The final part of this exciting instalment gives us an AMAL-controlled player and baddie:

```
Load "GAME_SPRITES.ABK"
Screen Open 0,320,200,16,Lowres
Curs Off
Flash Off
Cls 0
Get Sprite Palette
Double Buffer
Autoback 0
Bob 1,150,100,1
Bob 2,20,20,2
```

The string A$ is exactly the same as in the first program except that the horizontal and vertical positions of the player are fed into the external registers RA and RB.

These are then read inside the baddie control program stored in B$ to make that the evil beastie tracks us down!

```
A$="  Start: Pause ; Let R0=J1  ; "
A$=A$+"    Let RA=X ; Let RB=Y ; "
A$=A$+"    If R0&8 Jump Right ; "
A$=A$+"    If R0&4 Jump Left  ; "
A$=A$+"    If R0&1 Jump Up    ; "
A$=A$+"    If R0&2 Jump Down  ; "
A$=A$+"    Jump Start         ; "
A$=A$+"Right:             ; "
A$=A$+"    Move 10,0,2    ; "
A$=A$+"    Jump Start     ; "
A$=A$+"Left:              ; "
A$=A$+"    Move -10,0,2   ; "
A$=A$+"    Jump Start     ; "
A$=A$+"Up:                ; "
A$=A$+"    Move 0,-10,2   ; "
A$=A$+"    Jump Start     ; "
A$=A$+"Down:              ; "
A$=A$+"    Move 0,10,2    ; "
A$=A$+"    Jump Start     ; "
'
B$=B$+"Start: Pause           ; "
B$=B$+"    If X>RA Jump Right ; "
B$=B$+"    If X<RA Jump Left  ; "
B$=B$+"    If Y>RB Jump Up    ; "
B$=B$+"    If Y<RB Jump Down  ; "
B$=B$+"    Jump Start         ; "
B$=B$+"Right:             ; "
B$=B$+"    Move 10,0,2    ; "
B$=B$+"    Jump Start     ; "
B$=B$+"Left:              ; "
B$=B$+"    Move -10,0,2   ; "
B$=B$+"    Jump Start     ; "
B$=B$+"Up:                ; "
B$=B$+"    Move 0,-10,2   ; "
B$=B$+"    Jump Start     ; "
B$=B$+"Down:              ; "
B$=B$+"    Move 0,10,2    ; "
B$=B$+"    Jump Start     ; "
'
Channel 1 To Bob 1
Amal 1,A$
Channel 2 To Bob 2
Amal 2,B$
Amal On 1
Wait Vbl
Amal On 2
'
Repeat
  Inc SCORE
Until Bob Col(1)
Boom
Print "YOU ARE DEAD!!!! YOUR SCORE IS";SCORE
Update
```

That brings us to the end of a very practical column – hopefully in the next issue I should have some exciting news about the future of AMOS.

Save your typing fingers!

All of the stuff that I list on this page can also be found on the CoverDisk. To load the programs, first load your copy of AMOS, insert the CoverDisk and move your mouse up to the first item at the top left of the menu.

Click with the right button and the word "RUN" should be replaced by "LOAD". Now click with the left button and a file selector will appear. This is where it gets a bit tricky. Once all of the files have appeared inside the file selector box,, press the right mouse key and that list will be replaced with another! This new list is made up from the current devices recognised by your Amiga, including the CoverDisk.

All you have to do now is click on the name of the CoverDisk – CoverDisk31 – and wait for the files to be listed. Nearly there! The final step is to click on the directory "AMOS", wait for the list of files to appear and then click on the SetDir box.

Phew, what an explanation! To cap it all, if you own Easy AMOS it's all different – but that's another story!

Fancy a change?

Ben Pointer looks at some of the ways you can tart up your text in PageSetter II

You get two Compugraphic fonts in the PageSetter II package – although just recently I've heard that has shrunk to only one – so for headings and fancy titles you need to use every trick up your sleeve if you want to avoid paying out for more.

Probably the most striking instant change you can make is to fill characters with a pattern instead of using solid black. This can be achieved with just a few mouse clicks.

Highlight the text you want to fill with a pattern by dragging the text cursor over it, and then select the Bold style from the Type menu – this will thicken the letters so the pattern stands out more. Leave the text highlighted and choose Pattern from the Type menu. A requester appears with a range of "dotty" patterns along the top and 16 fancy fill patterns below.

Shades of grey

Select the fill pattern you like best and click on OK. Now click the Null Pointer gadget to see the results. The "dotty" patterns along the top simulate levels of grey, from solid white to almost solid black.

It's a bit like the shades of grey in a 16 colour greyscale image – the solid white pattern is the same as the white colour 15,15,15 on the RGB scale, the next pattern to the right is like 14,14,14 on the RGB scale, and so on across to the pattern on the far right which is like 1,1,1 on the RGB scale. To get solid black (0,0,0) you should select the None button.

The patterns that get printed to your dot matrix printer are similar to those produced by PostScript laser printers for shades of grey, though laser resolution is a bit better, of course.

Sometimes filled text looks a bit silly, especially if the pattern is a sparse one, but you can liven it up by adding an outline to the text – a thin solid black line around the edges of the characters.

Again, this is just a few mouse clicks away. Highlight your text again and select the Outline style from the Type menu. That style gets "added" to the Bold style we selected previously. Select the Null Pointer to see the new look.

If the text still looks a bit wishy-washy, one further trick we can use is to add a shadow behind it. Yet again, all we need to do is highlight the text and select the Shadow style from the Type menu. It gets added to Bold and Outline, and if you click on the Null Pointer gadget you'll see that we have a great 3D look.

The shadow is added slightly to the right of and below the text, and there's no way of changing that style. If you want a shadow that is to the left and above, you'll have to do it by hand.

Simply Clone the box that contains the text that is to be shadowed, highlight the text in this new box, change its style to just Bold and the Fill Pattern (from the Type menu) to None.

Now that it's solid black again, use the mouse to position it on top of the patterned text slightly to the left and above it. To stamp the shadow in place behind the patterned text, click the Send to Back gadget (top right of the lower set of gadgets in the tool box).

That's it – see you next month.

Getting white-on-black

I get so many letters asking how to get white letters on a black background, or a "wob" as it is known in the trade.

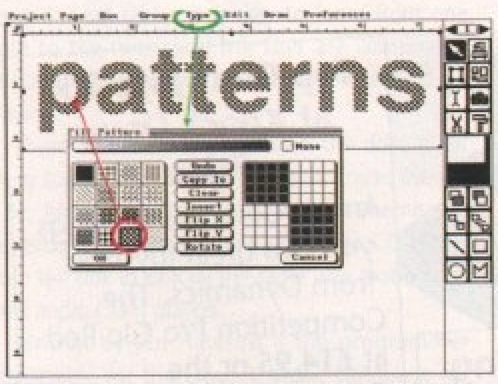
It's actually quite simple once you've been let in on the secret. First drag out a fairly large rectangle using the Draw Rectangle tool in the lower half of the tool box, then select Fill Pattern from the Draw menu.

The requester that appears looks and acts exactly the same as the requester we use to fill text. To get a solid black box, click on the black fill pattern, which is top left in the group of 16 patterns below the grey levels strip. Click OK to confirm your choice.

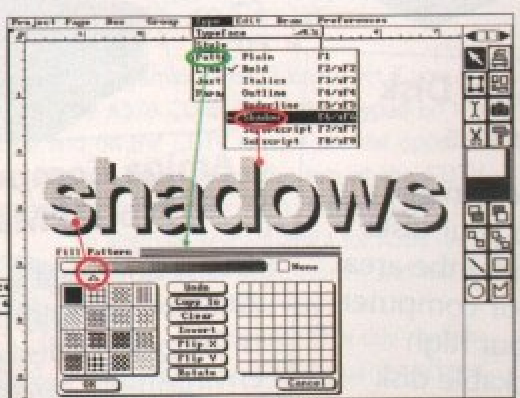
The rectangle should turn black. If it doesn't it means you are in wireframe mode – select Wireframe Graphics from the Preferences menu to switch wireframes off. Now drag out a text box on top of the black rectangle, using the Text Box tool in the top half of the tool box. Select the Text tool, click in the text box and select a large point size and the Bold style. Now type a few letters.

Drag the cursor over the text to highlight it, select Pattern from the Type menu, click on the solid white colour in the grey levels strip, and click OK. Hit the Null Pointer gadget to see your wob.

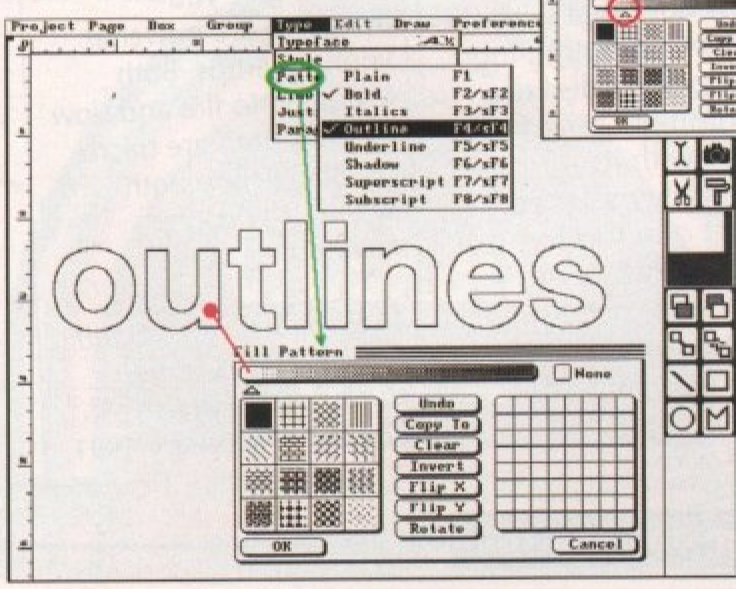
All you have to do now is adjust the black box to fit neatly around the white text.



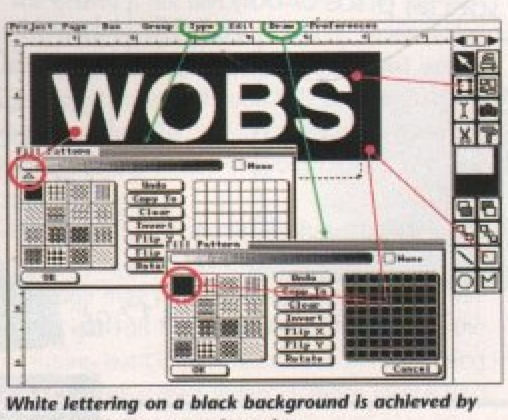
Fancy headings are just a few seconds away by using the Pattern requester from the Type menu



PageSetter II owners are lucky – it's impossible to achieve this effect so quickly in the much more expensive Professional Page



To get outlined text with white innards, select the solid white bit of the grey levels strip



White lettering on a black background is achieved by laying one box on top of another

Please use the order form on page 161

Schizophrenic add-on

Commodore's CD-ROM drive gets a rename. Jolyon Ralph reports its re-christening...

As reported last month, Commodore have decided that the add-on drive for the A500, previously the A690, will now be renamed the A570. This has annoyed some in the business who feel the new name will just confuse the public.

Developers have already started taking delivery of A690 drives for the A500, and with A690 labels and manuals these could become collectors' items in years to come!

The A570 is now in production and will ship at the beginning of April. Commodore are waiting until they have several tens of thousands in European distribution centres before they launch, as they do not want to repeat past mistakes where they have launched a product that was then not available for weeks.

One of the best selling CDTV titles so far has been Music Maker, so it is high time that I reviewed it, especially as some of the graphics code in it was written by me! Despite doing the initial work for this way back in November 1990, when there were only six CDTVs in the country and all of them NTSC models, I have only recently got a copy of this disc.

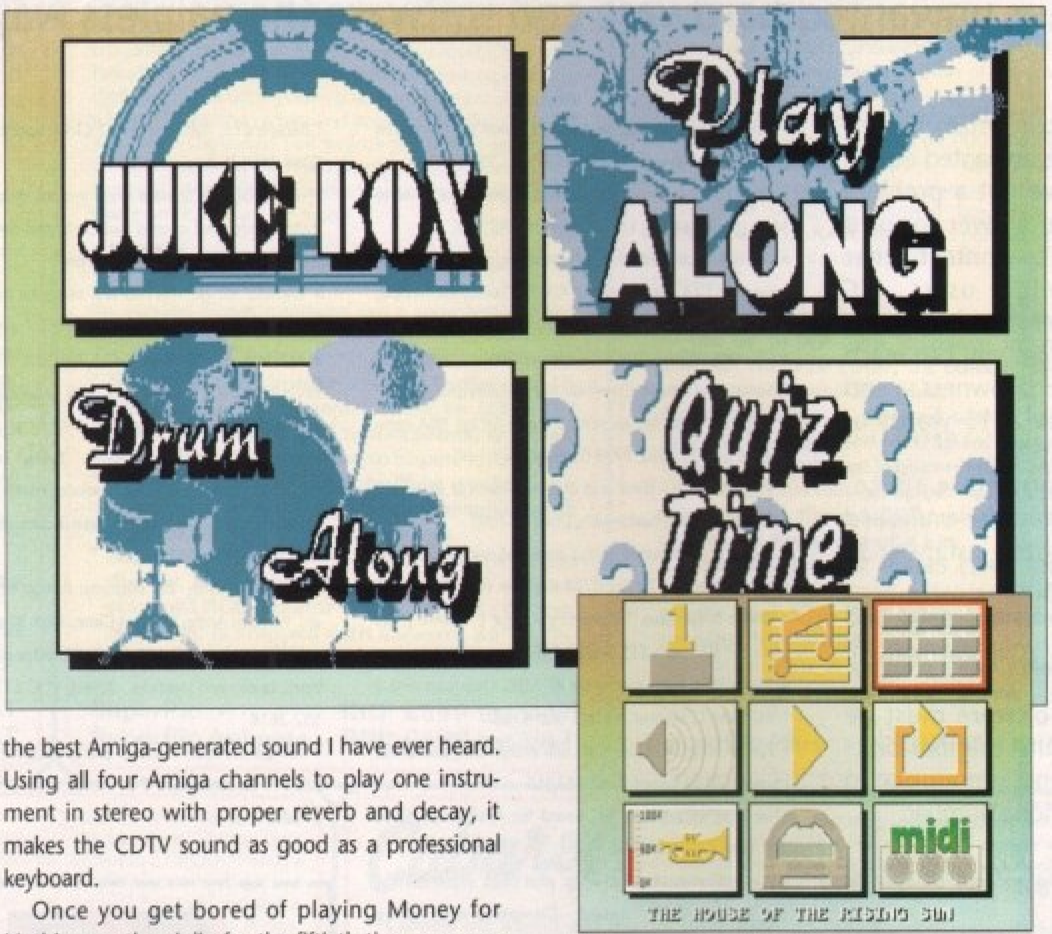
Music Maker is a sort of karaoke-with-instruments affair. Rather than singing along to the worst songs in the world, you can play along to them with your choice of instruments using your infra red controller.

Illuminated

It is not nearly as complicated as it seems. The keypad is set up so it is easy to jump from one note to the next, and the keys are illuminated onscreen so you can see what you should be playing.

There are 16 music tracks on the disk, all of them superb rerecordings of classic tracks like Let it Be, Money for Nothing, Crockett's Theme and Yesterday. These tracks are played as CD-Audio from the disk in exactly the same way that a standard audio CD is played.

Written by Jim Hawkins – the programmer responsible for the Opus-1 Music Language for the Amiga among other products – it boasts the best Amiga-generated sound I have ever heard. Using all four Amiga channels to play one instrument in stereo with proper reverb and decay, it makes the CDTV sound as good as a professional keyboard.



Menu screens from Music Maker

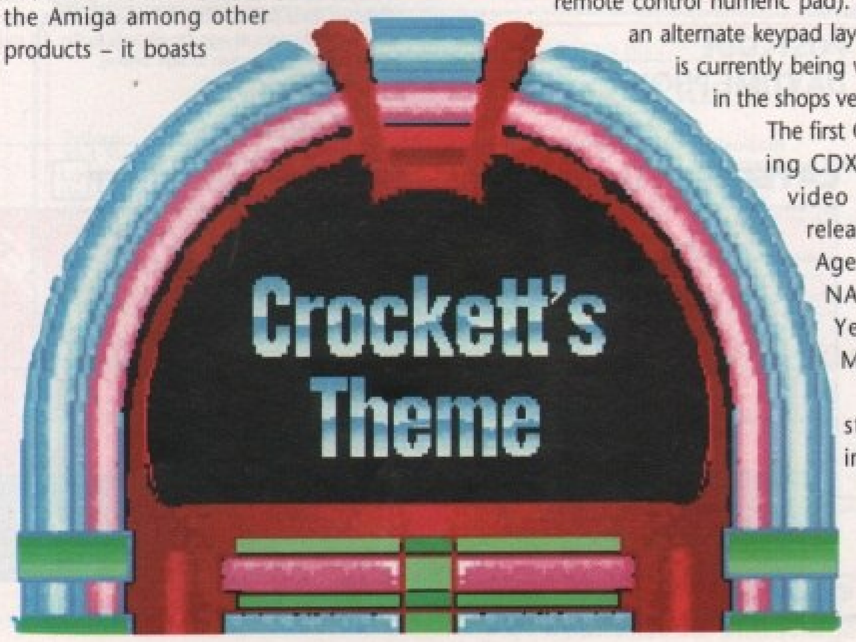
Once you get bored of playing Money for Nothing on the violin for the fiftieth time, you can settle down with some friends (if you have any left at this point) and play the music quiz. While it seems very simple, almost to the point of being tacky, it is quite fun, and certainly adds to the disc.

Warning

A word of warning – don't buy it yet if you are getting the A570 CD-ROM, as the keypad on the A500 and on the CDTV remote are the opposite way around (the 1 is on the top of the CDTV remote control numeric pad). A version that has an alternate keypad layout for A500 users is currently being written and will be in the shops very soon.

The first CDTV title containing CDXL quarter-screen video has just been released – The Heroic Age of Space Flight: NASA – the 25th Year, by Troika Multimedia, Inc.

CDXL (which stands for the incredibly uninteresting Compact Disc Transfer List) is a method CDTV developers can use to get video clips into products. This allows sequences of quarter screen HAM pictures digitised from video, along with a sampled soundtrack, to be played back directly from CD.



Use the jukebox in Music Maker to listen to the tracks

This title contains over 50 minutes of video taken from a 1983 NASA documentary. The whole documentary can be viewed, or clips can be viewed in conjunction with a database of information on NASA's aeronautical and space achievements.

It is listed as an educational title. As a History of the US National Aeronautical and Space Administration, its educational uses in Europe may be limited, but the video is quite interesting.

The quality is not bad, but suffers from the limitations of the Amiga Hold and Modify mode. A tiny quarter screen moving picture surrounded with a large black border, although it is the best current technology can offer, doesn't really work that well. It's like watching a video on a tiny Casio LCD television.

Despite this, the product is fun, and it's quite cheap too, listed at $24.95, or around £16. The technology may not improve to the point where you can get Full Motion Video from a CD in the near future, but I expect more titles will start using CDXL quarter-screen video in more interesting ways.

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NEW !



ColourPic is JCL's best selling video digitiser. Grabbing frames from a live video source in 64,000 vibrant colours is simplicity itself. If you have struggled with a colour wheel or splitter and have had to limit your video digitising to static objects or just monochrome, you will find ColourPic pure joy. ColourPic has its own built-in 64,000 colour framestore which is constantly digitising the incoming picture in REAL-TIME. Just press a key to freeze the picture and import it into the Amiga. It couldn't be easier!

NEW! ColourPic has been upgraded to include a S-VHS (Y-C) input and is now shipped with 'Cabaret' our comprehensive 24-bit image processing software in addition to the standard ColourPic software.

- **ColourPic can capture lo-res, interlace or hi-res images and convert them to HAM, 32 colour, 16 colour and monochrome IFF files.**
- **ColourPic has RGB, composite and UHF TV outputs from its framestore to drive a second monitor.**
- **ColourPic works with all Amiga computers, even the A500P.**
- **ColourPic can be upgraded to ColourPic AniMate.**
- **ColourPic has comprehensive monochrome image processing tools.**
- **ColourPic is shipped with Cabaret 24-bit image processing software.**

ColourPic	RRP £499 inc VAT
ColourPic AniMate	RRP £599 inc VAT

SuperPic



SuperPic is a framegrabber and genlock in one box! It is the perfect answer to anyone who needs all the facilities of real-time colour video digitising and the ability to combine computer generated graphics with a video source. SuperPic has a built-in 64,000 colour framestore which is constantly digitising the incoming video source in real-time. Just press a key to freeze the picture and import it into the Amiga. It just couldn't be easier! The genlock built in to SuperPic has an RGB output for the finest possible results in addition to composite output and provides the Amiga user with a very stable product, ideal for titling.

NEW! SuperPic is now shipped with 'Cabaret' our comprehensive 24-bit image processing software in addition to the standard SuperPic software and a three button optical mouse with mat.

- **SuperPic can capture lo-res, interlace or hi-res images and convert them to HAM, 32 colour, 16 colour and monochrome IFF files.**
- **SuperPic can be upgraded to SuperPic AniMate.**
- **SuperPic has it's own built-in genlock for combining computer generated graphics with a video picture – ideal for titling.**
- **SuperPic allows you to switch between Amiga display, framestore and video outputs on your standard RGB monitor at the touch of a button.**
- **SuperPic is shipped with Cabaret 24-bit image processing software.**

SuperPic	RRP £599 inc VAT
SuperPic Animate	RRP £699 inc VAT

ColourPic Plus

NEW !



ColourPic Plus, JCL's latest addition to their Amiga real-time colour video digitiser range, brings you the most powerful digitiser available to the Amiga user in its price range. A professional machine engineered to the highest standards and using the latest technology, ColourPic Plus combines all the features present in ColourPic with AniMate as standard and an impressive number of new features and new software.

The Impossible? – ColourPic Plus can do it!

Combine a framestore picture in 64,000 colours with text on an Amiga database display – without a genlock! With the optional 'Grabit' software from JCL and a prepared database control language module you can add pictures to your personnel file or parts list. Your database pictures could even be animated!

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- **ColourPic Plus is shipped with 512K RAM and can be upgraded to 1MB for more animation frames and even higher resolution modes.**
- **ColourPic Plus can switch between your Amiga display and the 64,000 colour framestore picture at the press of a key.**
- **ColourPic Plus has S-VHS (Y-C), RGB and composite inputs and provides RGB, composite and UHF TV outputs for an extra monitor if required.**
- **ColourPic Plus is shipped with Cabaret Plus 24-bit image processing software.**

ColourPic Plus **RRP £699 inc VAT**

AniMate

AniMate, for ColourPic and SuperPic, adds a whole new dimension to video digitising – colour animation. The complete AniMate package upgrades the digitiser to 512K RAM using a special RAM expansion card with time marker control logic and includes control software and manual. AniMate provides a simple and complete method of producing short sequence colour animated images on an Amiga, where the images come from live video such as a camera or a VCR. Simply point a camera at a moving object, select ANIM RECORD/SEQUENCE and press the space bar to capture a series of real life movements.

- **ANIM SET options include frame delay and first field hold off.**
- **ANIM RECORD options include sequence record and single step record.**
- **Select ANIM PLAY/CYCLE and the recorded sequence is repeated.**
- **ANIM PLAY options include sequence, single step, mouse scroll, cycle and ping-pong.**
- **Sequences recorded from a VCR may be joined together to produce ANIM files.**
- **The interval between recorded fields can be set at any number of fields.**
- **The individual fields of an animation may be examined by using the up/down movement of a joystick.**
- **Fields from an animation sequence may be converted to standard Amiga IFF format and then built into an ANIM format file for replay.**

Upgrade your ColourPic or SuperPic for £150 inc VAT

Cabaret

CABARET the image processing package shipped with ColourPic and SuperPic provides image import facilities together with colour and monochrome image processing functions to modify existing pictures. Cabaret has a wide range of filter and masking options to enhance pictures and produce interesting effects.

- **Cabaret will import and display HAM, EHB, 32, 16, 8 and 4 colour pictures plus Monochrome and Threshold images in normal and overscan modes.**
- **Cabaret will SAVE and LOAD images in standard IFF format, plus a wide range of other formats including TARGA and AIM.**
- **Cabaret will produce X & Y flips, mirror images, multiple images, magnified parts of an image and control colour balance, contrast and brightness.**
- **Cabaret works on all Amigas with 1 MByte or more of memory.**

CABARET PLUS software, which needs 3 MByte of memory to make full use of all facilities, has all the features of Cabaret – **PLUS**

- **Extra filters including Uniform, Kuwahara, Posterize, Median and Gamma.**
- **New features including Emboss, Dropshadow and Combine.**
- **Interlace and hi-res modes AND Save in 24-bit IFF!**

For the user with less than 3 MByte of memory the Cabaret functions may be used without the 'Plus' features.

Cabaret	RRP £29.95 inc VAT	Cabaret Plus	RRP £89.95 inc VAT

ColourPic, SuperPic and ColourPic Plus are available from selected dealers or direct from JCL.

** GOLD DEALERS AND STOCKISTS!! **

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JCL

About our framestore. . .

All of JCL's video digitisers can grab a frame from a live video source in 1/25th of a second using a 64,000 colour framestore which is constantly digitising the incoming picture in real-time. The framestore displays a picture of such high quality that you may suspect you are looking at a straight through connection from the video input, but don't be deceived, this is a digital picture, just press the Z key to see it freeze!

The framestore's 64,000 colour palette can be used to display previously digitised images stored on a disk as well as show Sculpt (and other) images in a much wider range of colours than the Amiga's HAM mode. The effect is stunning!

For your free show disk of pictures:-
Contact Carolyn on 0892 518181.

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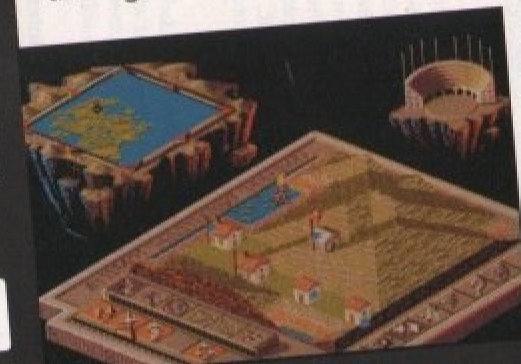


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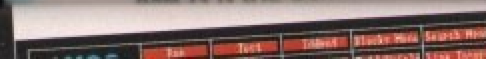
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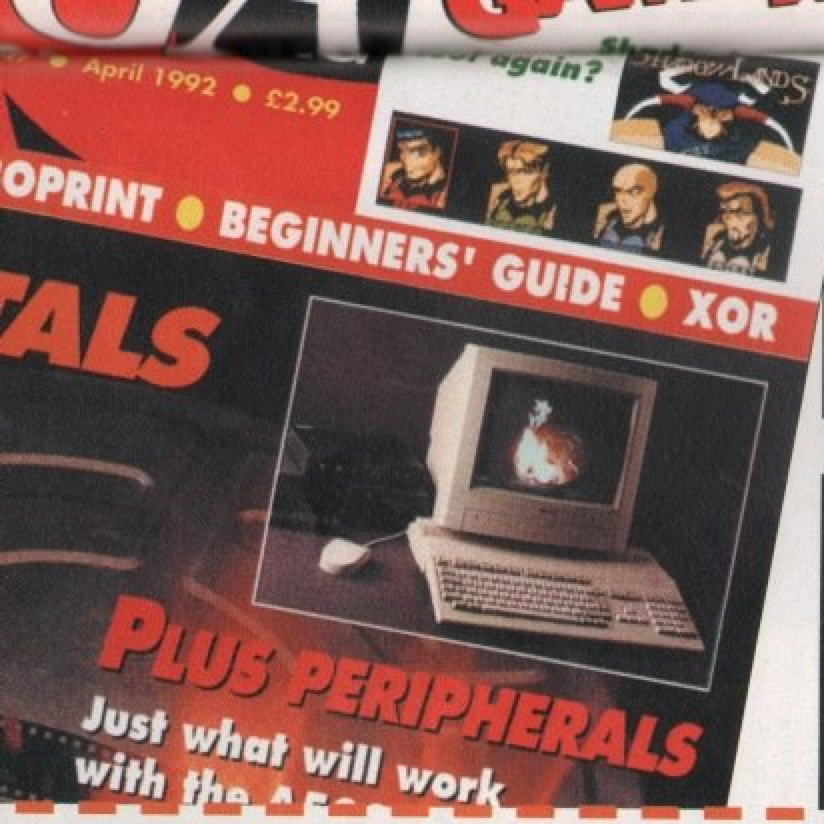
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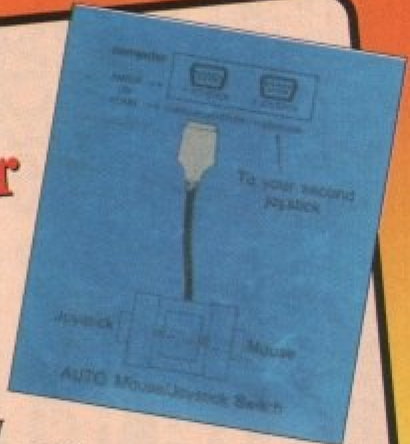
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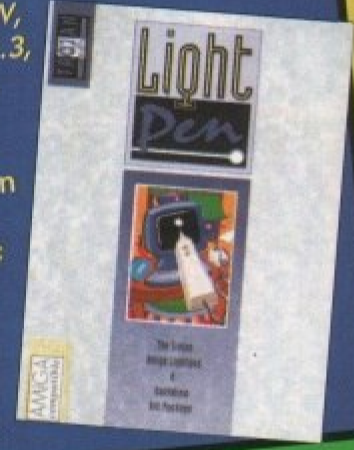
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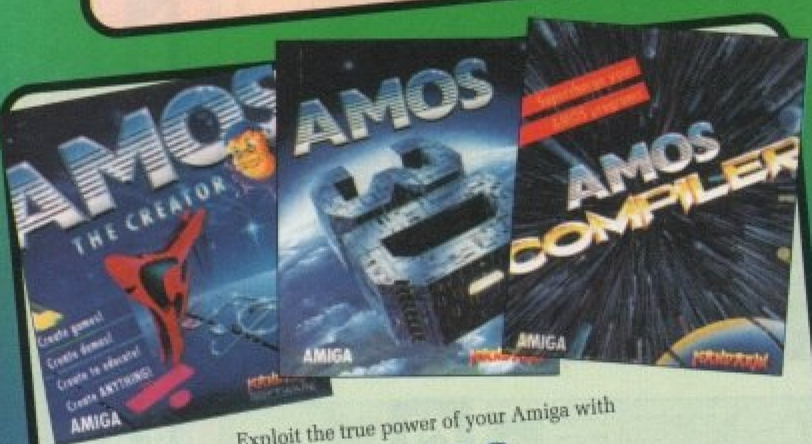
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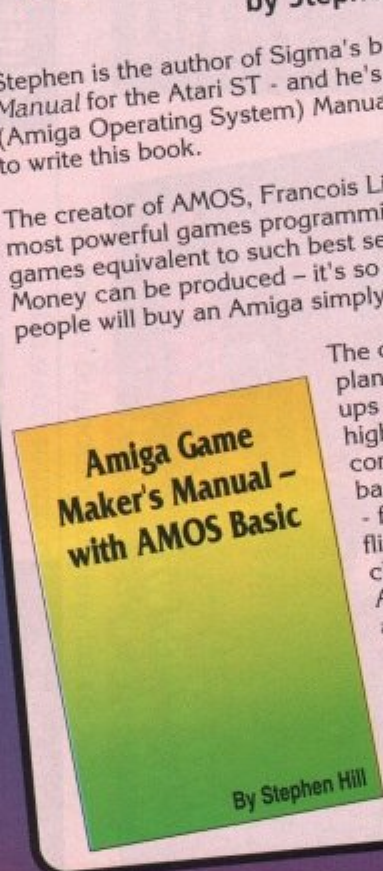
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Amiga Game Maker's Manual – with AMOS Basic

by Stephen Hill

Stephen is the author of Sigma's best-selling *The Game Maker's Manual* for the Atari ST - and he's the author of the new AMOS (Amiga Operating System) Manual, so nobody is better placed to write this book.

The creator of AMOS, Francois Lionette, has produced the most powerful games programming system. With it, Amiga games equivalent to such best sellers as Xenon 2 and Blood Money can be produced – it's so straightforward that many people will buy an Amiga simply to run AMOS Basic.



The contents include: Game planning - graphic design, mock-ups and sprites; Shoot-'em-ups - high speed AMOS sprites, fire control, collision detection, background animation; Simulations - from simple 3D movement to flight simulators; Role playing - characters, scenarios and magic; Adventure games - plans, rooms and commands; Animation, scrolling, sound and 3D; Links to assembler. Numerous tested, working programs illustrate the book.

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Heart of The WorkStation is a powerful shareware package called SID. When you use it you can say goodbye to faceless blank screens and complex commands. Instead your mouse takes full control. Fiddle with files, display text and graphics, sample sounds, uncrunch archives... all this and more with just a click of a mouse button.

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Full mouse control of PFM's window environment means a really user friendly program. PFM for the Amiga appears and runs exactly the same as our top selling PFM program for the Atari ST.

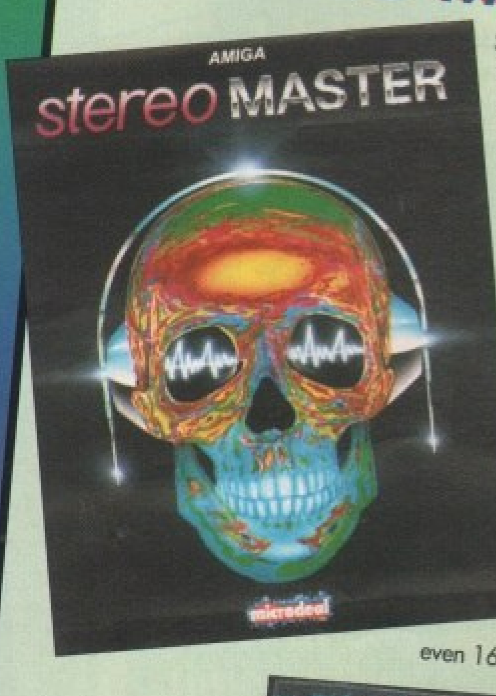
Automatic Standing Orders means that regular payments are never forgotten, whilst the graphic display will help you manage your account more effectively. Personal Finance Manager will even attempt to match your statements by automatically identifying transactions that haven't yet been cleared.

- *The number of entries is limited only by the size of the memory*
- *Full Workbench interface*
- *Account entries are automatically placed in date order*
- *Selectable date formats*
- *Automatic standing orders*
- *Auto balancing against statement*
- *Graphic analysis including: Balance plot Budget comparison. Spend pie charts*
- *Windows are moveable and re-sizeable*
- *Graphics are self-scaling to fit windows*
- *All windows can be displayed at the same time*
- *Account print option*
- *Full multi tasking – allows multiple account access*

MichTron®

CODE 9942 PRICE £24.95

PLAY IT AGAIN WITH STEREO MASTER!



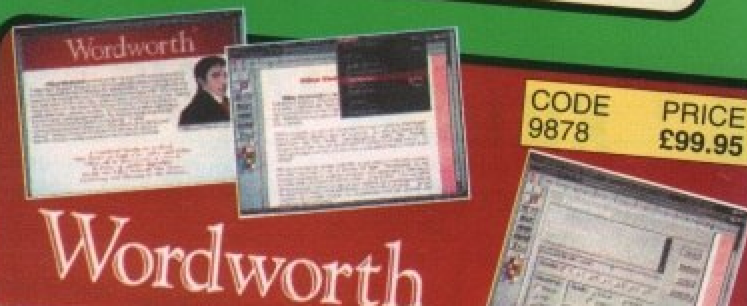
Stereo Master is the latest full feature STEREO sound sampler for the Amiga. This completely new hardware cartridge contains DUAL analogue to digital convertors, ensuring the ultimate in 8-bit sample quality.

The system can record in high quality stereo from its twin phono input sockets, sampling anything from a portable CD player to live radio!

Stereo Master comes complete with powerful editing and special effects software which allows samples to be loaded in 8, 12 or even 16-bit resolutions.



CODE 9814 PRICE £34.95



CODE 9878 PRICE £99.95

Wordworth

a writer's dream

v1·1

WORDWORTH is probably the best value word processor available for your Amiga. Written by UK Company Digita (which means using The English Collins based spell checker and thesaurus) it has all the features of more expensive packages:-

- Human Interface Protocol making operation simple and pleasurable
- WYSIWYG display taking advantage of the Amiga's graphic capability
- Incorporate and manipulate external pictures from D Paint for example
- Mix and match enhanced fonts and symbols, Amiga fonts, colourfonts and your printer's fonts. Postscript compatible
- Mailmerge facilities

DIGITA INTERNATIONAL

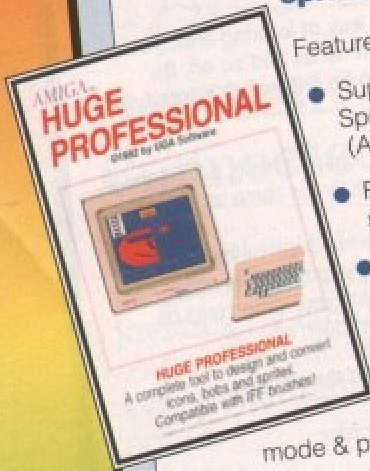
Dreams become reality with WORDWORTH

AMIGA COMPUTING

BARGAIN OFFERS

HUGE PROFESSIONAL

A complete program for producing icons sprites, brushes and bobs.



Features:

- Supported formats: Image (C & ASM), Sprite (C & ASM), Brush (ILBM), Bob (Amiga Basic) and icons (Workbench)
- Full conversion ability between all supported formats
- Icon editor built in, enabling full icon properties modification
- Functional & user friendly interface, keyboard shortcuts
- Complete user control over display mode & palette
- Advanced drawing capabilities, including 6 drawing tools, flood fill & basic dithering technique
- Font support, palette control & source code palette IO
- Bitmap editor capabilities, including cut/paste, mirror & rotator and 2 pages for drawing
- Advanced zoom concept, featuring custom magnification trailer zoom & co-ordinates display

Why use several utilities if one program can do it all?

CODE 9855 PRICE £17.95

POWERPACKER PROFESSIONAL v4.0

You can't pump up a disk, but with **POWERPACKER** you can compress its contents into less than two-thirds of the space otherwise required for storage - on a floppy disc or hard drive.

POWERPACKER uses sophisticated "crunching" algorithms to reduce the sizes of files, allowing and average of 40% more material to be stored on the medium of your choice.

POWERPACKed programs load, "auto-decrunch" and run.

POWERPACKER includes several freely distributable utilities which access packed files at the click of an icon, so you can get full and quick use of them without decrunching:

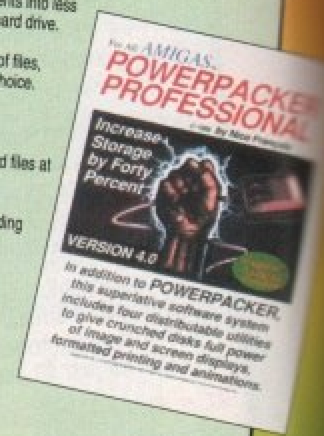
PPMORE A fully-pledged screen text reader with options for string search and sending an on-screen image to a graphics printer.

.PPANIM Plays a crunched anim file. Tremendous savings possible for storing and playing your animations.

PPTYPE Formats a crunched text file to the printer, including pagination and perforation skips.

Plus **DECRUNCH**, a utility that restores files to original sizes.

POWERPACKER PROFESSIONAL © 1990 By Nico François



Features:

- ★ **Make your files 70% smaller!**
  Crunch (compact) executable/datafiles and make your files to 70% smaller. With the help of the PPloadseg utility, which you can install on your (hard) disk, you now can even crunch libraries and devices.
- ★ **Extra Powerpacker utilities**
  PPmore >> Displays packed ascii files
  PPshow >> Displays packed IFF pictures
  PPanim >> Displays packed animations
- ★ **Comes with 2 new libraries.**
  Powerpacker and a new requester library with even more features and better menus.
- ★ **Crunchfactor even better than version 3.0b**
- ★ **Detects Data or Command files.**
- ★ **Full Arexx Support.**
- ★ **Improved Menus and Colour Table**
- ★ **Special Kickstart 2.0 version Included**

CODE 9838 PRICE £14.95

KILL DA VIRUS

A professional viruskiller that recognises more than 138 viruses.

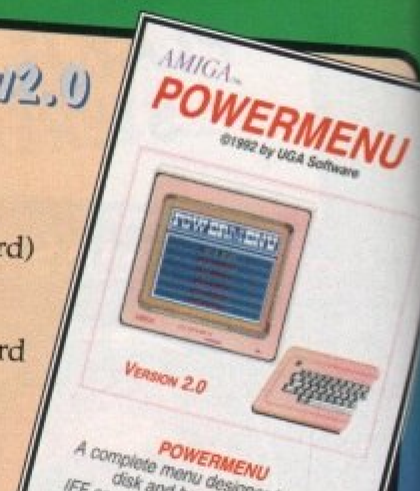


Features:

- ★ Three versions included from a title bar clock version through a custom screen 3D gadget version (KDV5).
- ★ Brainfile which is being updated through PD channels and of course on Newsflash so you will always have an updated version.
- ★ Store your bootblocks on disk so you can restore them when your bootblock is destroyed by a nasty boot virus (Saddam etc etc).
- ★ Checks your memory and will kill any live virus to avoid further spreading on healthy disks. Any unknown bootblock will be analysed with a 'learn' option so next time it can be identified.
- ★ Userfriendly menus so easy to work with.
- ★ Full support of Kickstart 2.0 and hard disks.

CODE 9863 PRICE £14.95

POWERMENU v2.0



Features:

- Userfriendly utility to produce your own (hard) disk menu's
- Ideal for floppy and hard disk users
- Full support of mouse, joystick and keyboard
- Multitasking
- IFF picture (background pictures) and Amiga font support
- Big Agnus support
- Built in virus protector
- Comes with PD menu compiler so you can spread your menu
- Several system functions (chipmem on/off, time) included

CODE 9862 PRICE £17.95

AMIGA COMPUTING READER OFFERS

Amiga Computing Magazine Binder
Using a system of strengthened steel rods, this handsome binder, embossed with the *Amiga Computing* logo, will hold 12 issues of your favourite magazine securely in place.

£5.95 *9509*

Amiga Computing Mouse Mats
Our mouse mat with the *Amiga Computing* logo, is the perfect desktop environment for your mouse, with its specially designed perfect grip surface. It ensures smooth movement, gives super positive control while protecting your tabletop from scratches.

£4.95 *9508*

Amiga Computing Dust Covers
Made from rugged PVC, bound with strong cotton and sporting the *Amiga Computing* logo, perfect for protecting your computer.

£4.95 *9507*

Lockable Disc Boxes
Prevent accidental damage to your discs, while keeping the area around your computer tidy with our high quality lockable disc boxes.

3.5" Disc box (50 disc capacity)	£9.95	*9826*
3.5" Disc box (100 disc capacity)	£12.95	*9827*

The Amiga Computing Back Issues

February 1992 + 3.5in disc	£3.10	*9744*
March 1992 + 3.5in disc	£3.10	*9745*
April 1992 + 3.5in disc	£3.10	*9746*

Back issues from other months are available – phone for details
Add £2 Europe/Eire, £3.50 Overseas for postage per issue

Amiga Computing Back issue Bundle

November 1991- April 1992 + 3.5in disc £18.00 *9889*
Add £6 Europe/Eire, £12 Overseas towards postage

SPARE DISCS

5 Assorted Amiga Computing cover discs	£7.50	*9887*
25 Assorted Amiga Computing cover discs	£20.00	*9888*

Sim City/Populous
Two classic best selling games available in one package. With Sim City take the destiny of the world's greatesy cities or the city of your dreams in hand. Populous lets you create the world in one week and destroy it in a heartbeat.

£17.95 *9868*

Amiga Made Easy
Make the most of your Amiga and use it to its full potential. This book explains exactly how to use the Amiga effectively – even for newcomers with no previous experience. Existing owners will also benefit as a comprehensive guide to more advanced applications is included.

£12.95 *9871*

Spell!
This unique package makes practising spelling loads of fun. Suitable for children from 5-15, SPELL! allows the user to learn at his or her own pace. It includes five different tests, each making use of more than 5,000 words – so much variety that you'll never get bored.

£8.95 *3614*

Fun School 3
Designed by a team of educationalists, these exciting programs provide the ideal way of introducing youngsters to the joys of using a computer. The computer monitors the child's progress and adjusts the skill level automatically, so children can enjoy learning at their own pace.

Under 5's	£17.95	*9809*	7-11 yrs	£17.95	*9811*
5-7 yrs	£17.95	*9810*	All 3 age groups	£44.95	*9812*

Amigados A Dabhand Guide
A comprehensive guide to the Amiga's Disc Operating System, this book takes a new approach to understanding and using the Amiga and contains a wealth of practical hands-on advice, hints and tips.

£14.95 *9866*

Re-Ink Spray
Save up to 90% on ribbon costs and help the environment with this simple cost effective answer to exhausted printer ribbons! Open up your ribbon cartridge, spray with Re-Ink and you have a ribbon which is as good as new, and give a cleaner blacker print with no blotches. Works for all fabric ribbons.

£12.95 *9998*

AMIGA COMPUTING

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Overseas orders despatched by Airmail.
All prices include postage, packing and VAT
Valid to May 31, 1992

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AMC 5

THE COMPLETE GUIDE TO AMIGA TRIVIA

ROCK LOBSTER

WIN! A GENUINE AC COFFEE!

YES! you've read about it in the Gamer reviews, you've even seen it in the occasional screen shot... and now you can WIN your very own cup of Amiga Computing vending machine coffee!

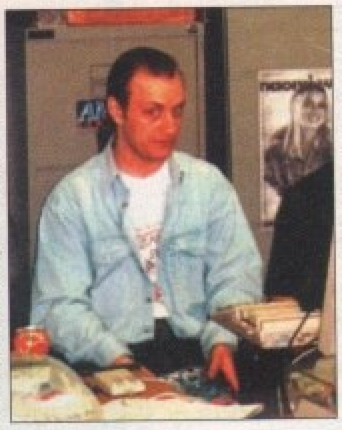
A subtle blend of caffeine, cigarette ash and steroids is not available in any shops.

This once-in-a-lifetime Rock Lobster competition is giving every dedicated Amiga Computing reader the chance to win an autographed cup of a strictly limited edition Europress beverage. Choose from coffee (white or black), white tea, chocolate or, if you dare, chicken soup.

All you have to do to win is estimate how many cups of white coffee our production editor, Phil Morse, consumed the day this magazine went on sale (2/4/92). Send your entries to the usual address before 7/5/92.

TOP JOURNALIST JOINS AC

After months of head hunting and weeks of interviews, Amiga Computing are pleased to announce the arrival of our new "Quite Important Writer", Darren Evans. The former editor of his school magazine rose to the top in 26 short years. We are absolutely delighted to have Darren on board and are sure he will be an instant hit with our readers. Darren has been an Amiga user for almost eight weeks and fondly remembers the days when he was quite content to program his tumble drier and construct hardware projects from bits and pieces he found round the back of his local Tandy store every night. "I don't know anything about the Amiga – but then neither does anyone else when you get down to the nitty gritty of how the thing works" offers Darren. "I have even heard stories of people hacksawing their Amiga 2000 casings to try and get flicker fixers to fit in a normal slot!" Darren is clearly an Amiga demigod in the making and as such *Amiga Computing* is absolutely over the moon to have him on the team. Amiga Computing editor, Stevie Kennedy, summed up the genuine feeling of the entire magazine team, offering the following insight: "I fully expect *AC*'s circulation to triple overnight now that we have an established name like Darren on board."



Picture courtesy of DAN and BIFF

HEADLINE HAVEN

Five commonly used computer magazine headlines that have been hammered to death so much, they should be banned by law

Hard and fast (hard drives) • *Cracking the shell* (CLI etc)

All the world's a page (DTP) • *The joy of sticks* (joysticks)

A blit on the side (graphics)

next month

the next issue of AC, featuring the most up-to-date Amiga news + views, will be on the shelves of all good newsagents on Thursday May 7

CROSSWORD SOLUTION

due to the incredibly complicated (oh yes) world of magazine deadlines we can't tell you who won – but here is the answer to last month's crossword

A	I	D	E	D	■	M	A	P
B	■	P	■	E	■	A	■	A
A	S	S	E	M	B	L	E	R
N	■	■	■	O	■	E	■	A
D	A	T	A	■	U	S	E	S
O	■	O	■	D	■	■	■	I
N	E	W	S	A	G	E	N	T
E	■	N	■	U	■	M	■	I
D	O	S	■	B	A	S	I	C

ADVERTISERS' INDEX

GAMER

"...It ain't over till the film planner sings..."

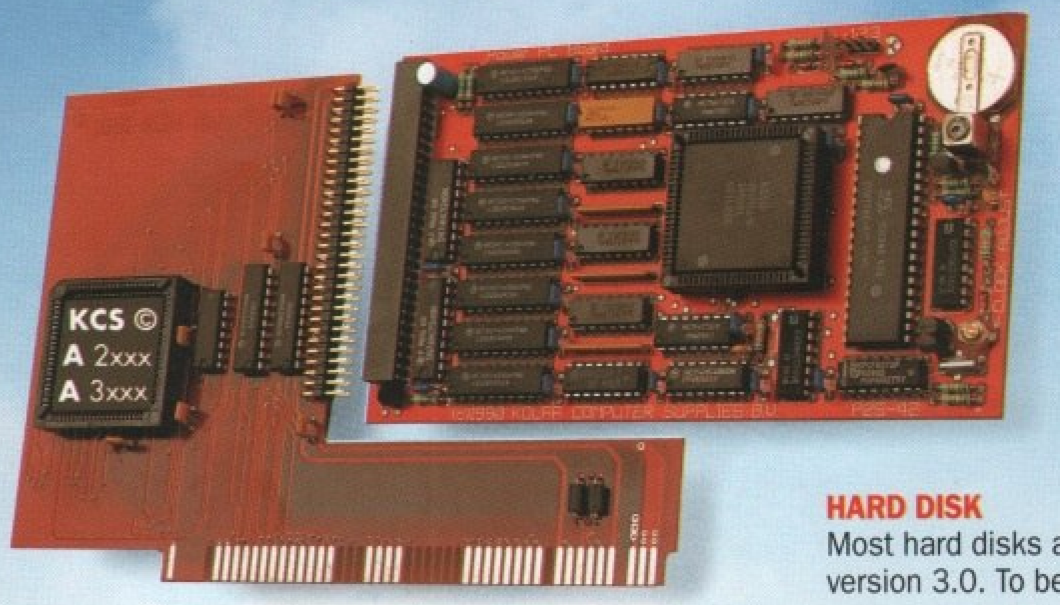
KCS POWER PC BOARD FOR YOUR AMIGA

The best of both worlds in the space of one

PC — AMIGA

Now available with or without MS-Dos See below

Adapter + PC Board for the Amiga 1500/2000/2500/3000



For the Amiga 500

A500P version now ready and gives you total 2Mb Chip Ram. When ordering state which one you require.

See us on Stand D32 at the Amiga Shopper Show in May

HARD DISK

Most hard disks are supported with version 3.0. To be sure give us a ring.

The KCS Power PC Board adds 1Mb memory to your Amiga and a real time clock

Think how much 1Mb memory plus a clock costs £__,__

Think how much MS-Dos/GW-Basic/Shell/Dos-Help costs £__,__

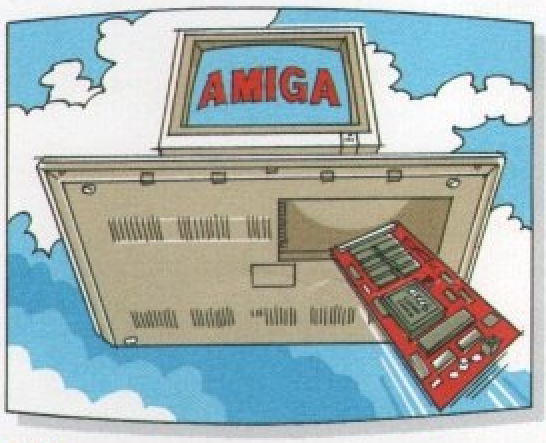
Which leaves the cost of an AMIGA/PC just £__,__

For so little outlay the Power PC Board turns your Amiga into an up and running powerful PC, with no hidden costs. The cheapest PC in the world?!

Run heavyweight professional PC software on your Amiga/PC



Microsoft flight simulator 4.0

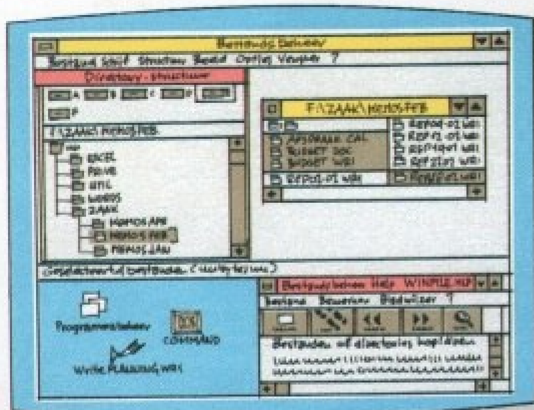


EGA

Will work from the full EGA colour palette. Both EGA and VGA will work on a standard TV or monitor and in most cases without using interlace.

VGA

Version 3.0 of our software comes with VGA colour and mono option. EGA/VGA will work on all standard Amigas irrespective of which chip set you have.



Microsoft windows

Some extra Goodies:

- FLICKER FREE FIXER in PC interlace mode. Will work with all Amigas. Software emulated.
- PROCESSOR SPEED can be slowed down from 100% to as low as 16%, so if you have never reached the highest level in a game, now is your chance.
- KCS PC-MOUSE driver will work with your Amiga mouse.
- PAUSE can be activated at any time during a game or program, allowing you to continue at your leisure.

Technical Specifications:

- Excellent compatibility
- 704Kb memory in MGA/CGA mode
- 640Kb memory in EGA/VGA mode
- 200Kb extra memory ie: MS-DOS RAMDISK (reset proof)
- 1/2 Mb extra FAST Ram plus 1/2 Mb Ram Disk for normal Amiga use plus real time clock in all modes
- All future upgrades are software driven
- Processor speed = 11 MHz
- Video — runs faster than most AT/286 computers
- Disk drive — runs faster than most AT/286 computers
- Fitted in seconds and does not invalidate your guarantee
- Once fitted forget it – Switch on computer, you have Amiga. Reset and load PC disk and in seconds you have a PC. Reset and you have Amiga again.
- Help-Line and excellent Back-up service

PRICE

Including MS-Dos 4.01/ DOS-Help and on-board memory.
£219.95 incl. VAT/Carr.
Excluding MS-Dos, but including on-board memory.
£189.95 incl. VAT/Carr.
Adaptor for 1500/2000/3000 –
£74.95 incl. VAT/Carr.

Available from your local computer shop (If they haven't got it – Ask them why not!). Or direct from Bitcon Devices

BDL
BITCON DEVICES LTD.
88 BEWICK ROAD, GATESHEAD, TYNE & WEAR, NE8 1RS ENGLAND
TEL: (091) 490 1919, HELPLINE: (091) 490 0202
FAX: (091) 490 1918

VISA — Access

Compatibility is excellent but no-one can guarantee every single program available, therefore if your purchase depends on a particular program, please ask us first or send in a copy of the program. (With suitable S.A.E. if to be returned). Price subject to change without notice.

Wholly developed and produced in the Netherlands

Some of our importers Worldwide:

Australia: HPD (Tel: 08 349 8466. Kaotic (Tel) 03 879 7098. Spain: Discover Inf. (Tel) 957 47 89 38. Sweden: Delikatess-Data (Tel) 31-300580, Docado (Tel) 40-497480, Canary: Customs Chipx (Tel) 928 271064. Denmark: Betafon (Tel) 31 31 02 73. Portugal: Softclub (Tel) 01 3528452. Ireland: Computer City/Dublin 745250. New Zealand: Pazac (Tel) 054-82949. All trade enquiries welcome. UK and Overseas (PAL only).

NEW

THE COMPLETE COLOUR SOLUTION

£179

Vidi ... No 1 in UK & Europe (Leading the way forward)



Amiga Computing: The best Amiga digitiser has had the technicolour treatment. Vidi must be one of the most exciting peripherals you can buy for your Amiga.

Micro Mart: When I first saw Vidi "in the flesh" as it were, at the CES show last September it looked to be the answer to a frustrated Digi View owner's dreams – in fact to see pictures appearing on screen without the customary two minues wait seemed almost too good to be true. I have consistently produced more good quality pictures in the short time I have had Vidi than I ever did with Digiview.

Zero: Now under normal circumstances cheap usually means poor quality but this is not the case with Rombo. Why? cos Vidi-Amiga is the best digitiser for under £500 and I've tried them all.

Amiga Format: Where quality is concerned, Vidi produces some of the best results I've seen on any digitiser at any price.

Amiga User International: The latest addition to the Rombokit is called Vidi-RGB and brings this already impressive package to the realms of totally amazing. CONCLUSION: Who will find Vidi-Amiga useful? The answer to this is almost anyone with a video recorder or camera and a passing interest in graphics.

Get the most out of your Amiga by adding:

"The Complete Colour Solution"

The Worlds ultimate creative leisure product for your Amiga. Capture dynamic high resolution images into your Amiga in less than one second.

And Look No Filters

Images can now be grabbed from either colour video camera, home VCR or in fact any still video source. The traditional method of holding three colour filters in front of your video camera is certainly a thing of the past. Because Vidi splits the RGB colours electronically there are no focussing or movement problems experienced by some of our slower competitors. Lighting is also less of an issue as light is not being shut out by lens filters. Put all this together with an already proven Vidi-Amiga/VidiChrome combination and achieve what is probably the most consistant and accurate high quality 4096 colour images ever seen on the Amiga.

The colour solution is fully compatible with all Amiga's from a standard A500 to the ultimate A3000. No additional RAM is required to get up and running.

You will see from independant review comments that we are undoubtedly their first choice and that was before the complete solution was launched. If you have just purchased your Amiga and are not sure what to buy next, then just read the comments or send for full review and demo disk.



Actual unretouched digitised screenshot

Features ...

- Grab mono images from any video source
- Capture colour images from any still video source.
- Digitise up to 16 mono frames on a 1meg Amiga.
- Animate 16 shade images at different speeds.
- Create windows in both mono & colour.
- Cut & Paste areas from one frame to another.
- Hardware and software brightness & contrast control.
- Choice of capture resolutions standard & Dynamic interlace.
- Full Palette control.
- Add text or draw within art package.



Full colour demonstration disk available for only £1.95 to cover P&P.

ROMBO Limited

6 Fairbairn Road, Livingston, EH54 6TS. Tel: 0506-414631 Fax: 0506-414634